

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

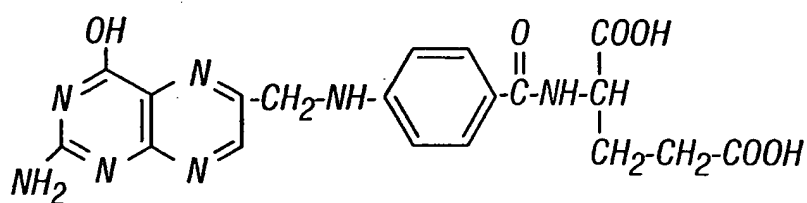
Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

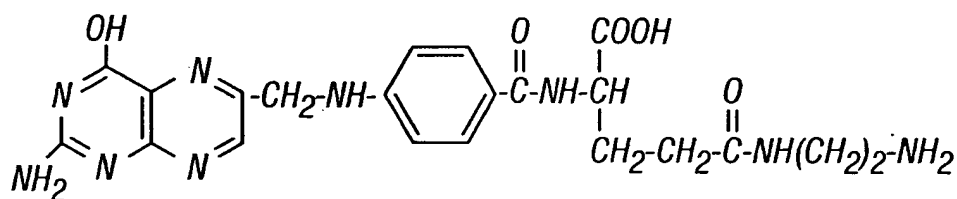
**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

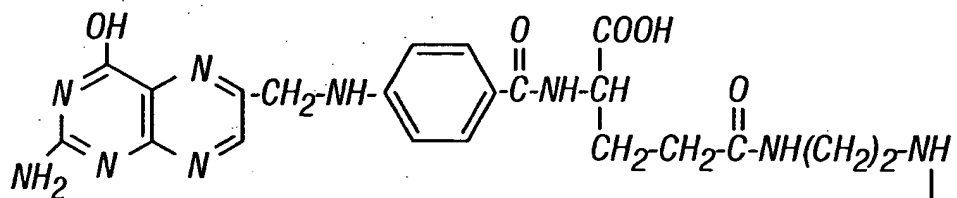
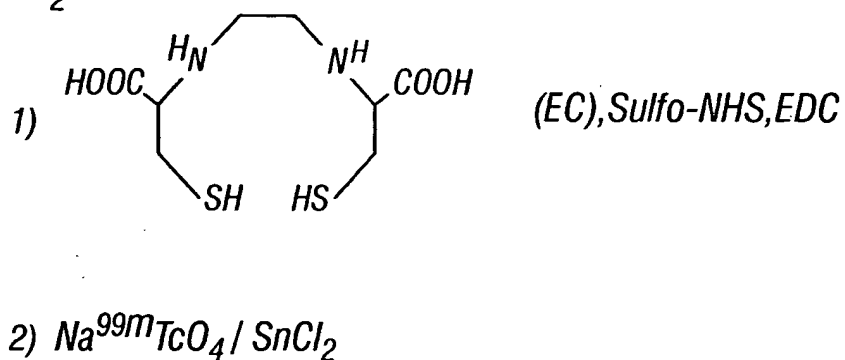


Folic Acid

Ethylenediamine  
EEDQ



Folate NH<sub>2</sub>



<sup>99m</sup>Tc-EC-folate

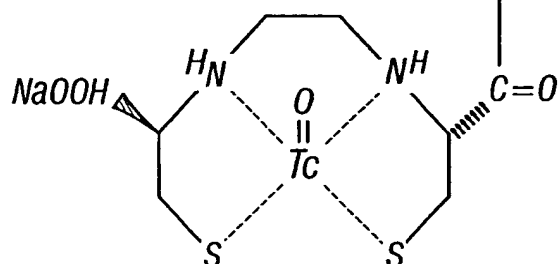
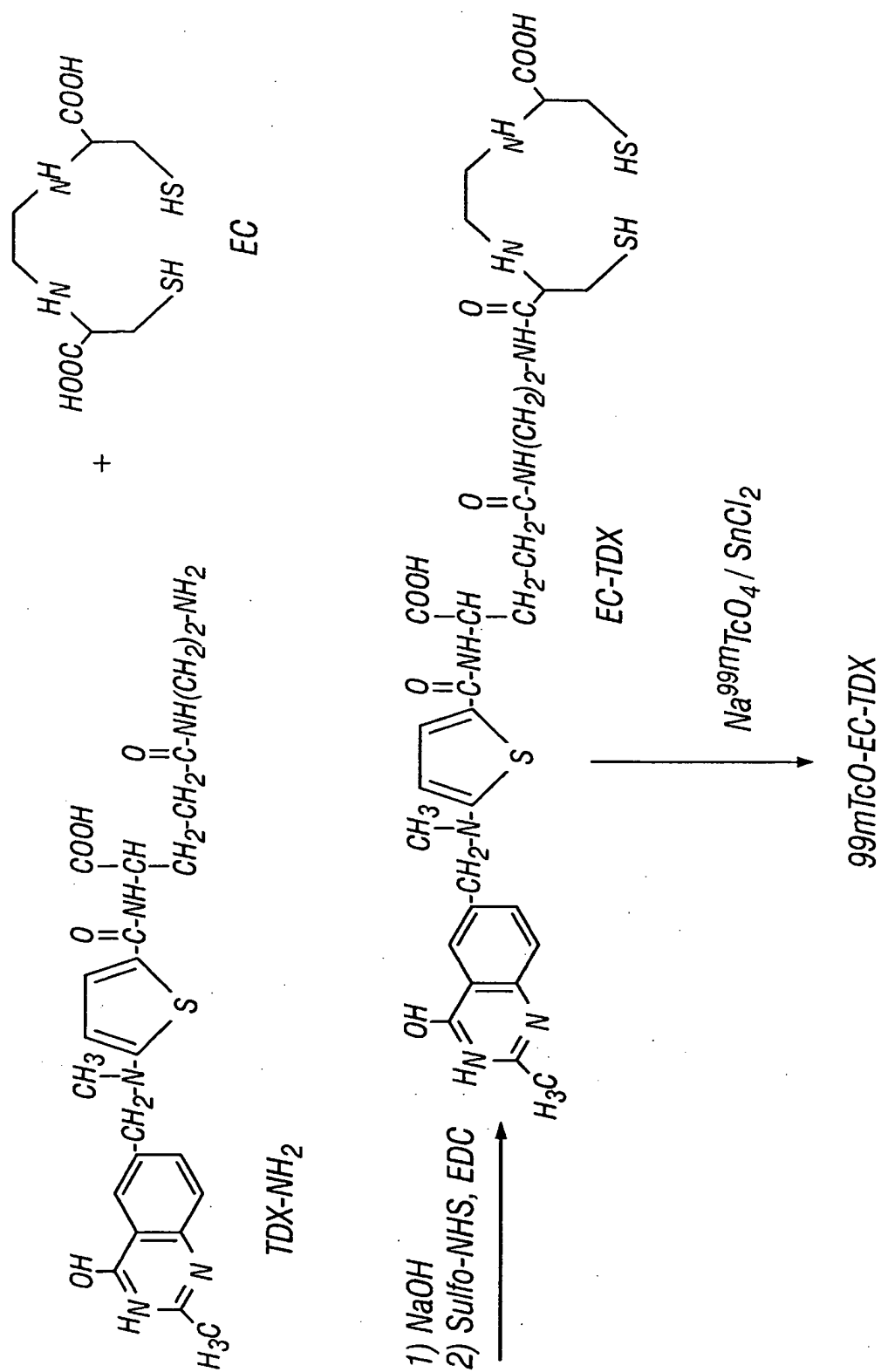


FIG. 1





**FIG. 3**

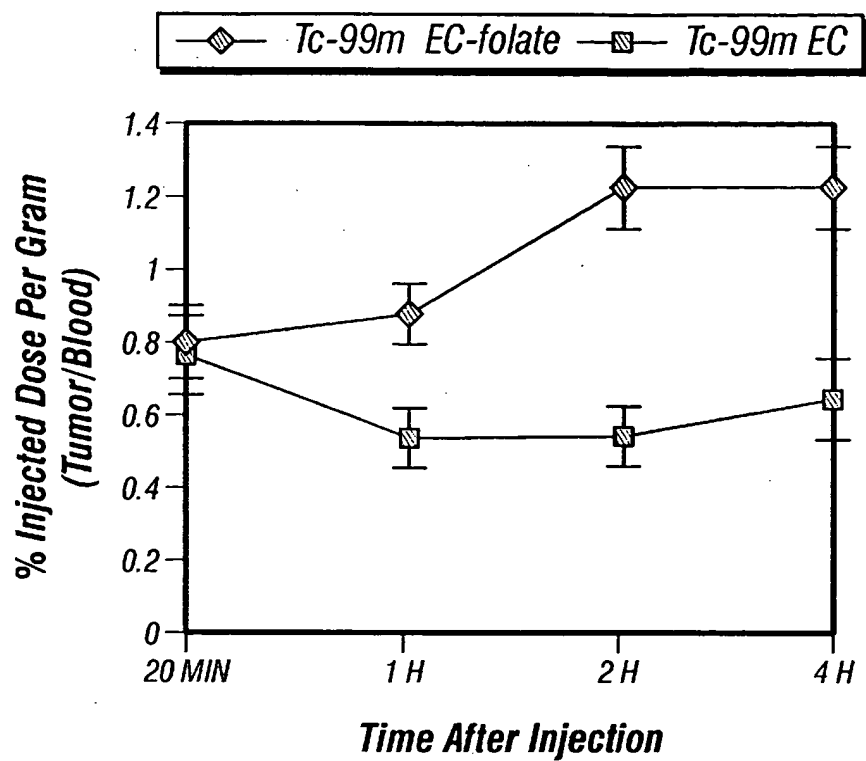


FIG. 4

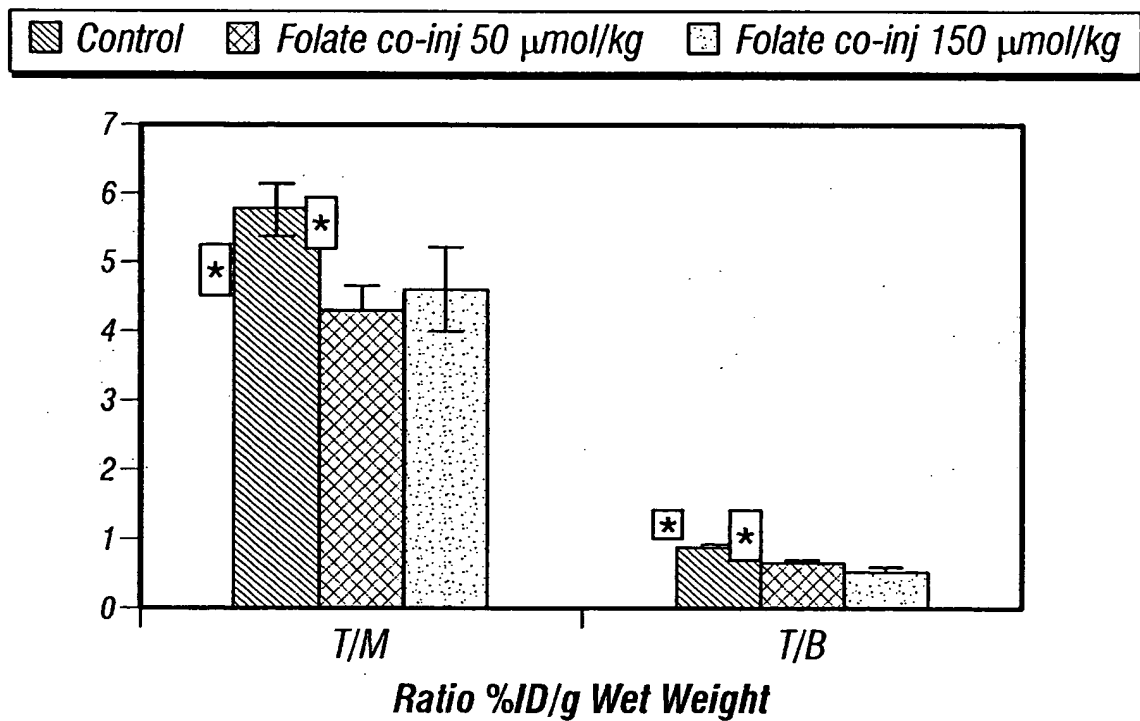
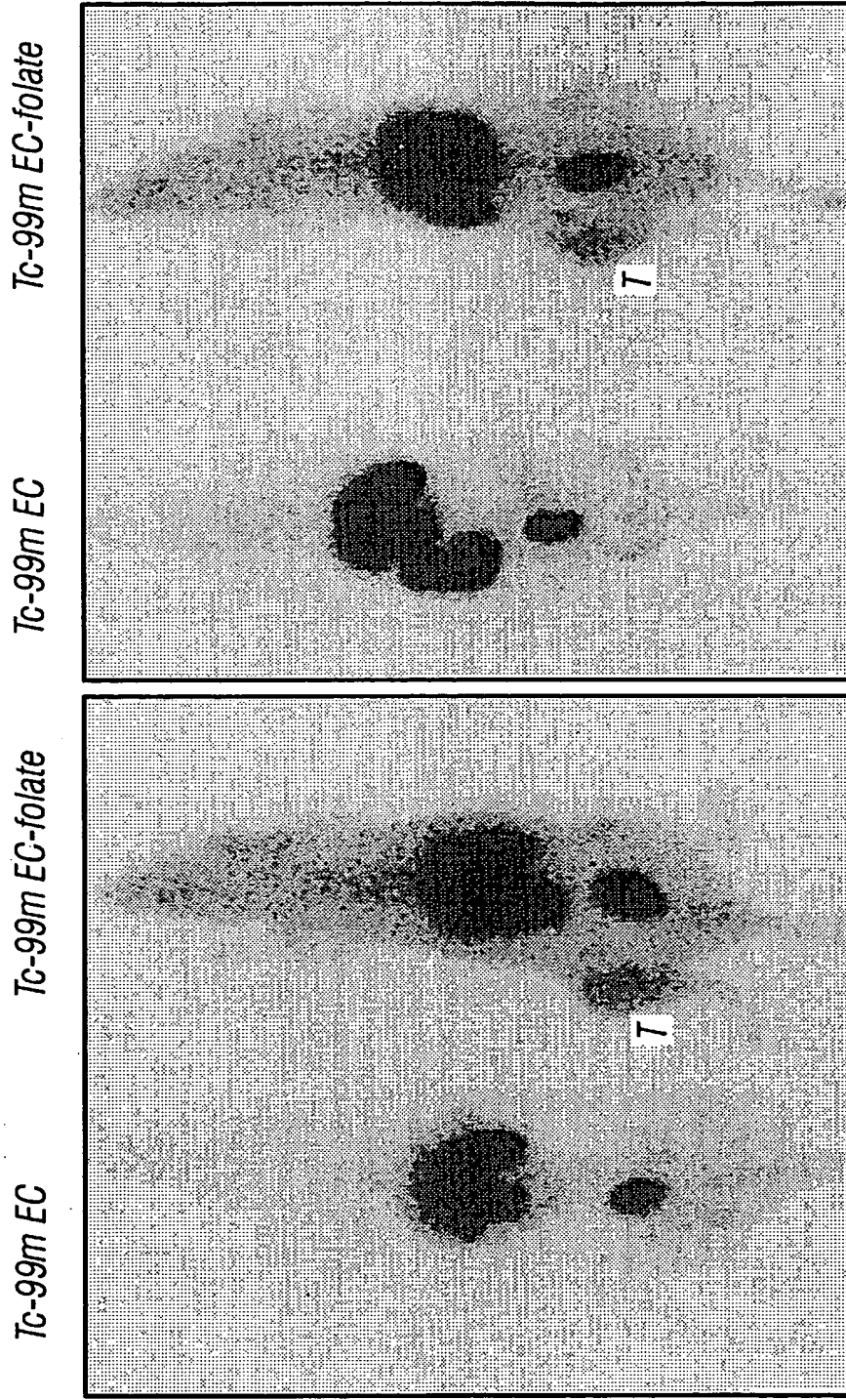
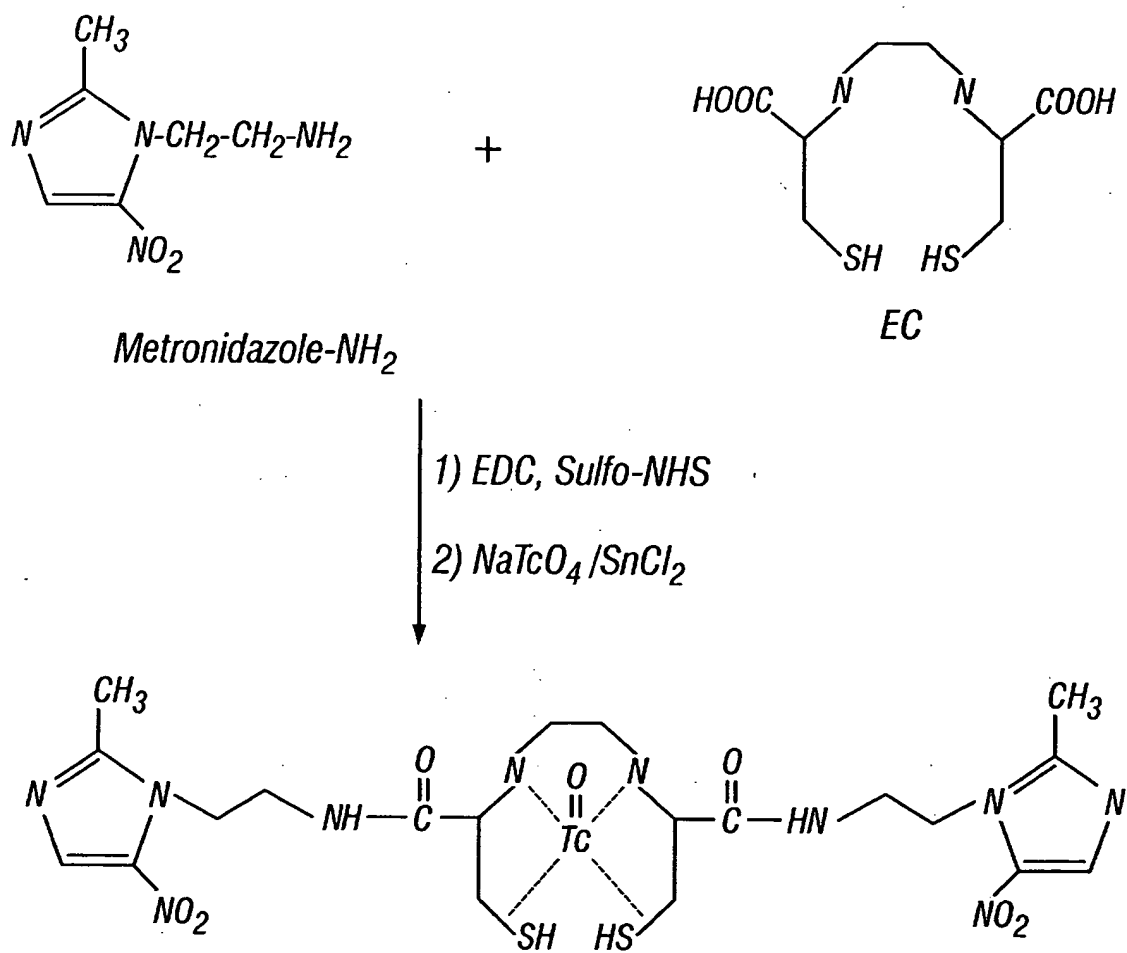


FIG. 5

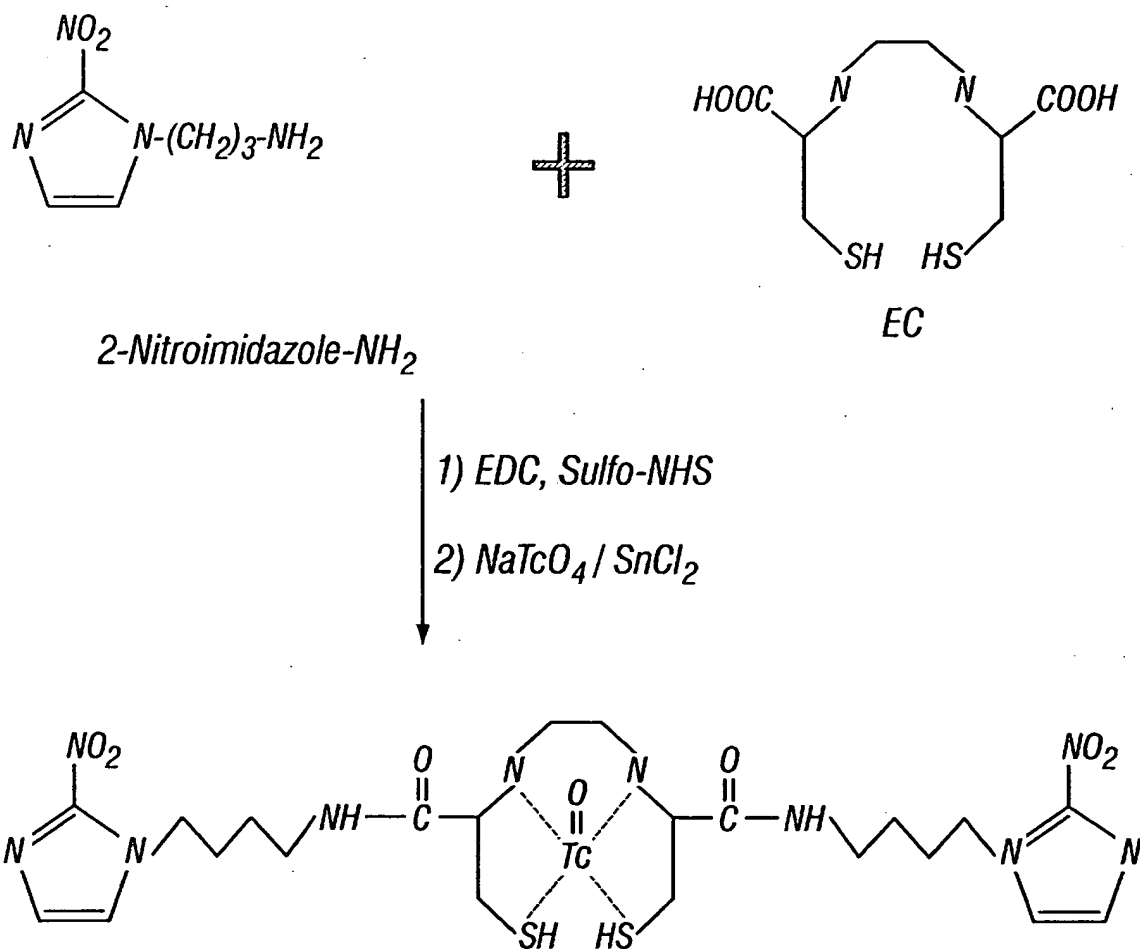


**FIG. 6A**

**FIG. 6B**

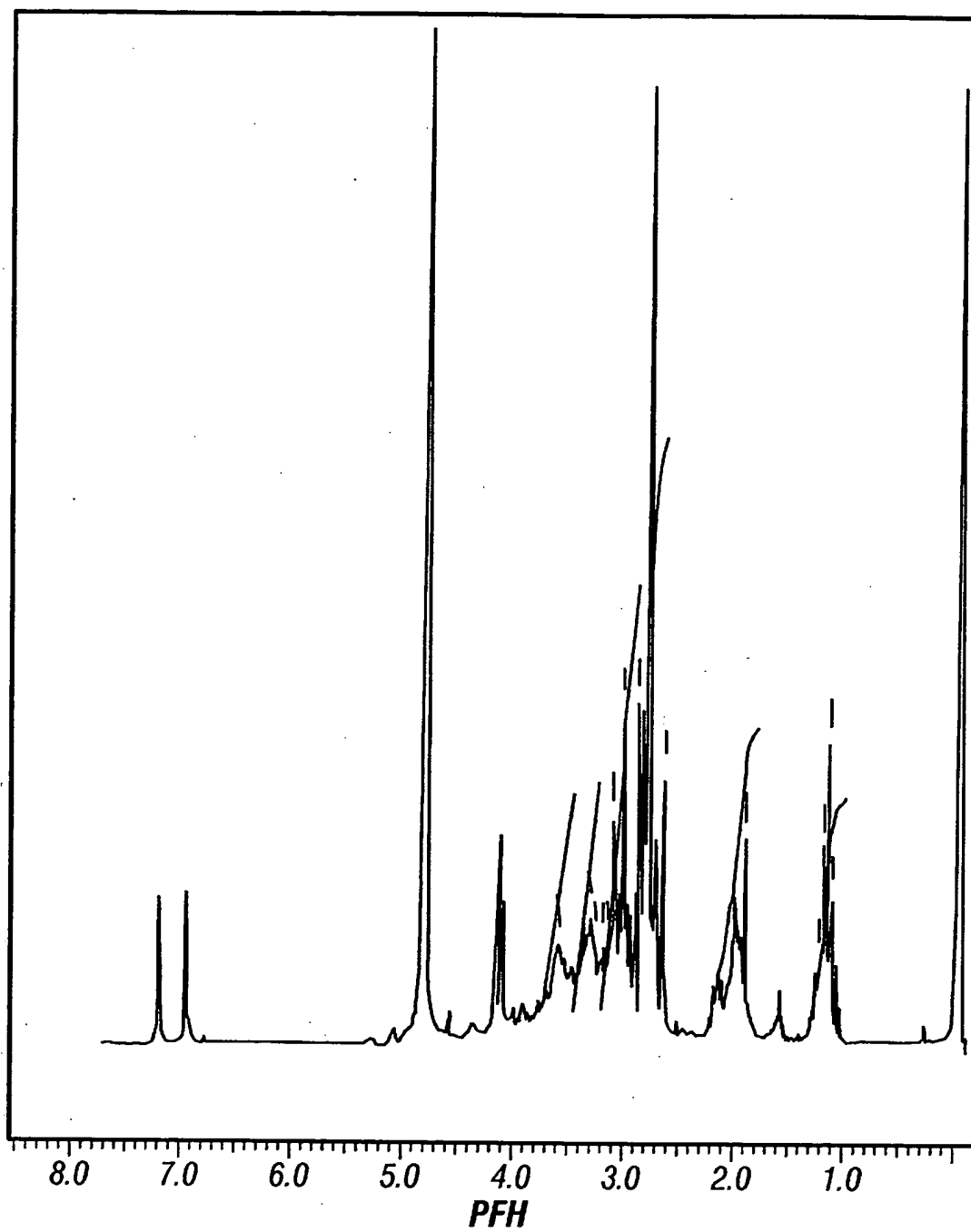


**FIG. 7**



**FIG. 8A**





**FIG. 8B**

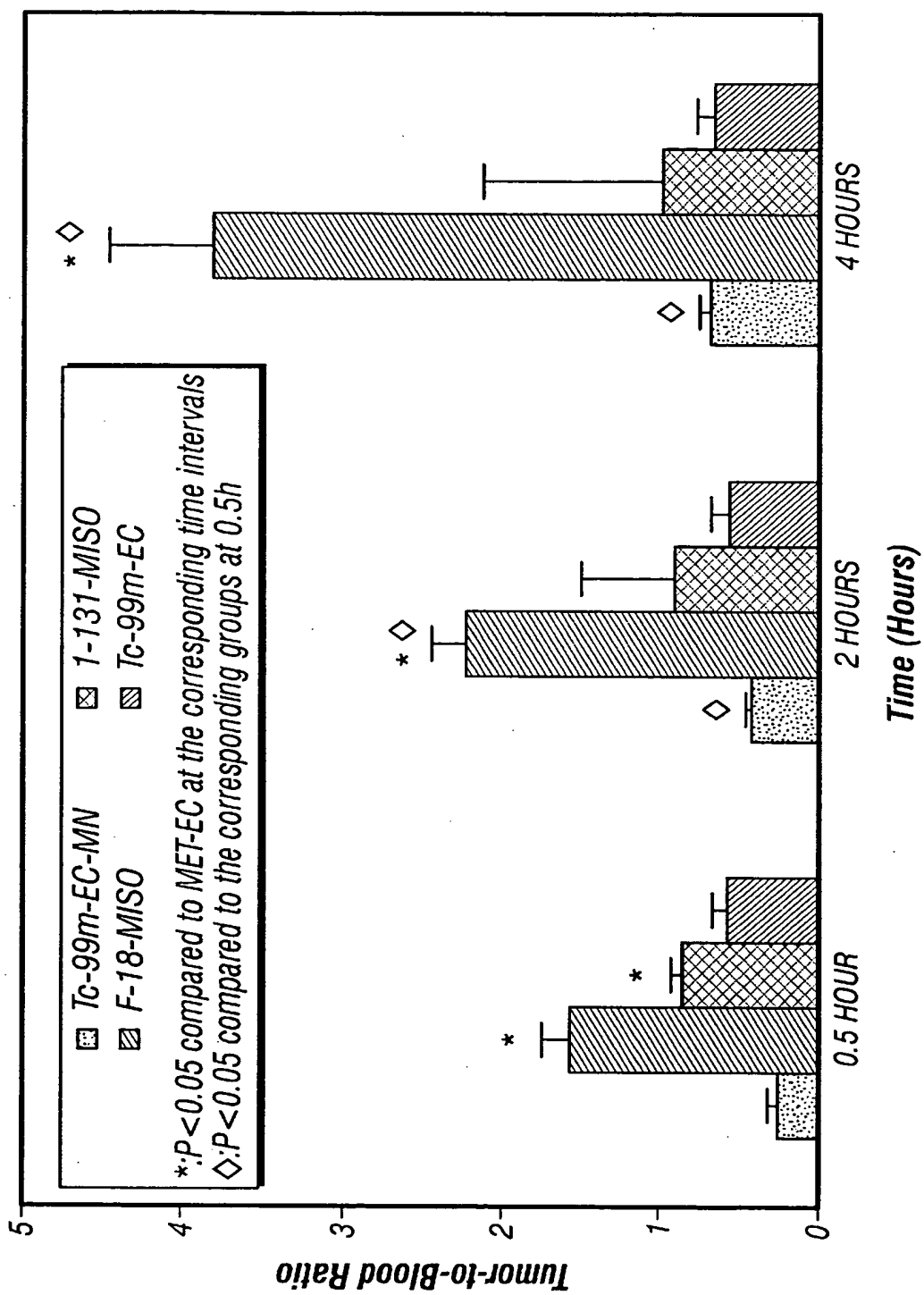
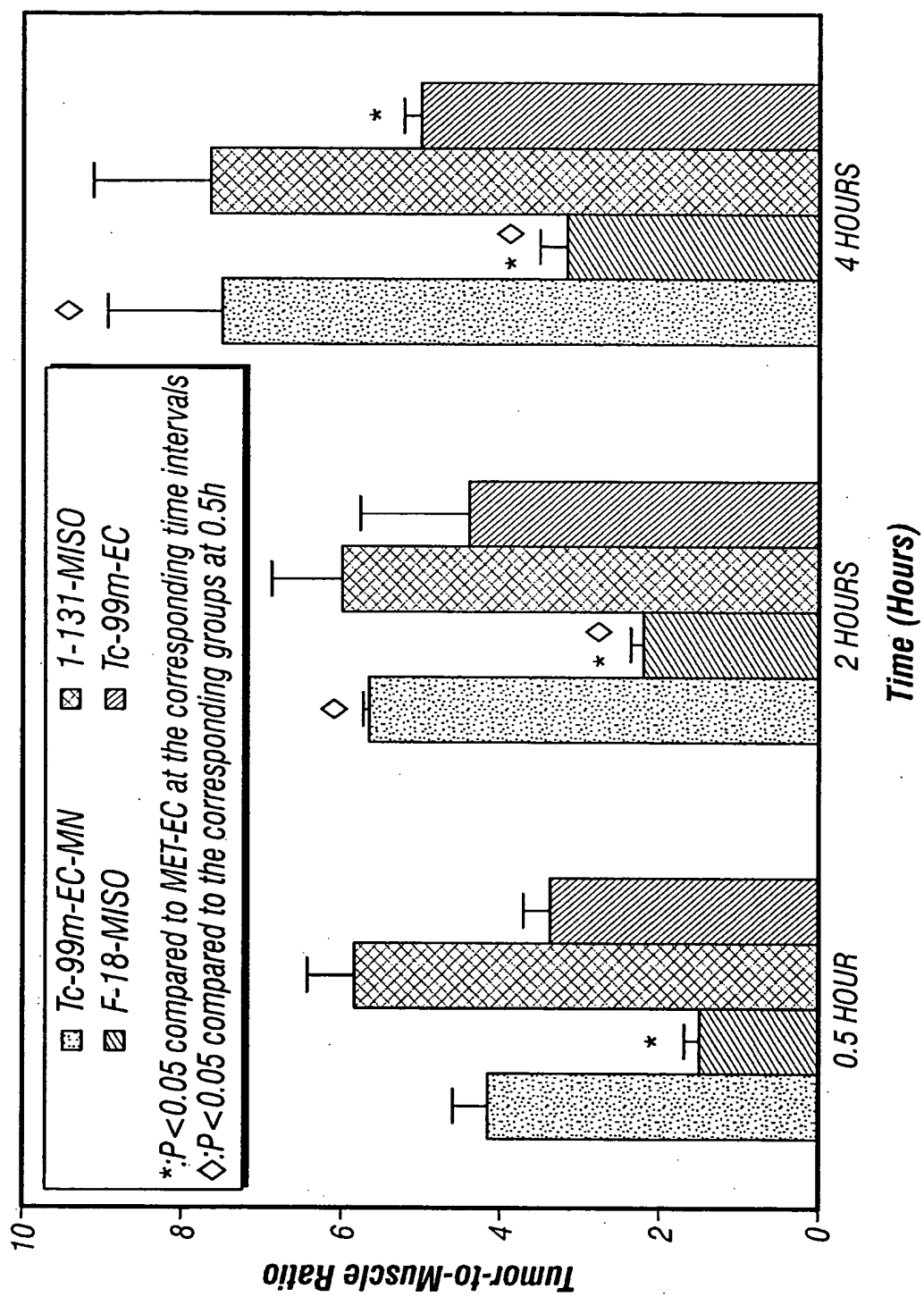
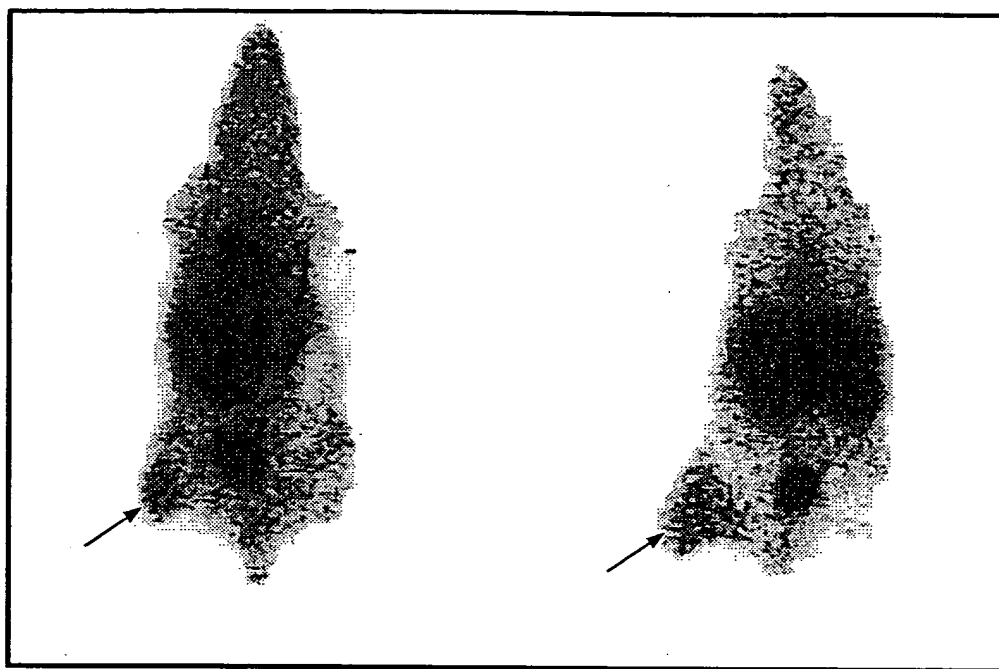


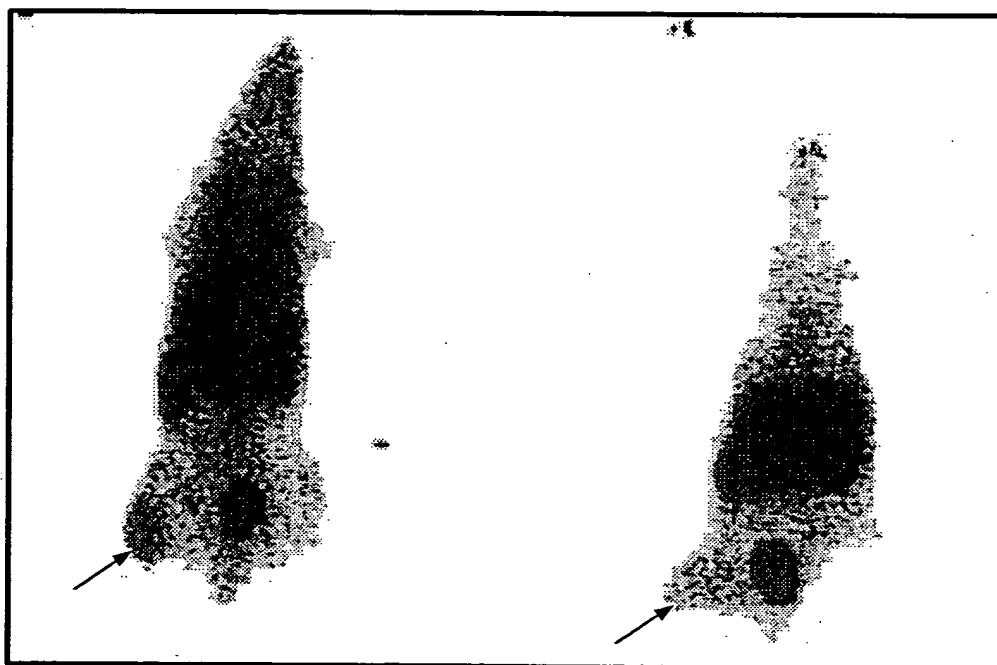
FIG. 9



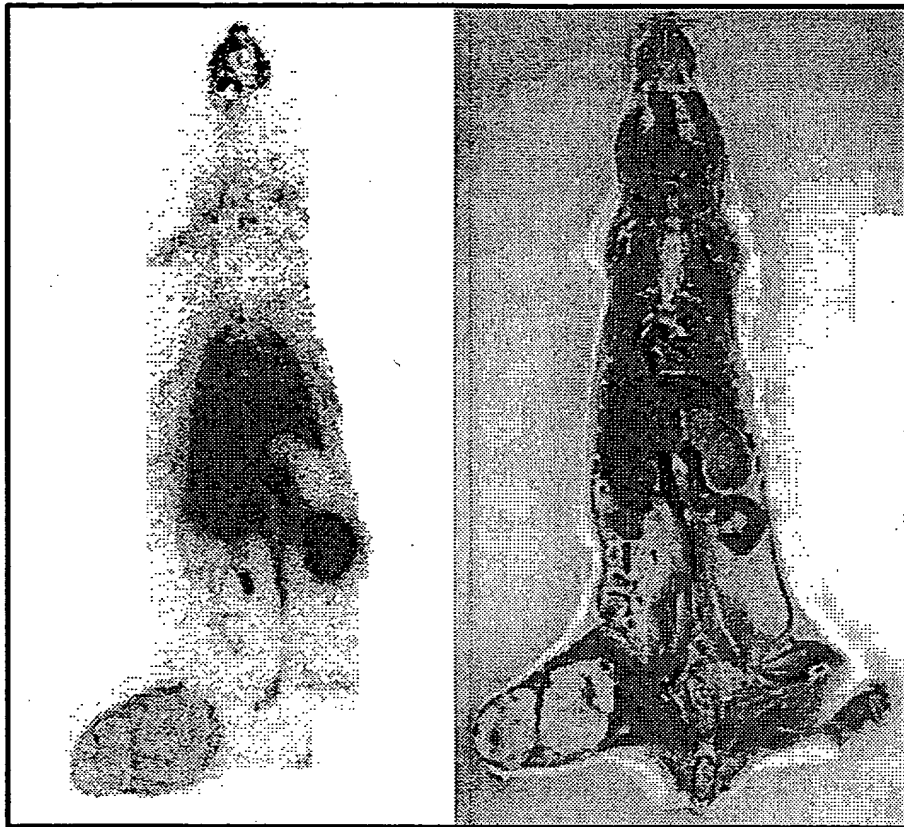
**FIG. 10**



**FIG. 11A**



**FIG. 11B**



**FIG. 12**

3-10-1999

EC-(2-NIM)2 after adding serum 3:20

Date: Mar 10 1999  
Data File:

Start time: 16:02

Accum time: 00:00:50  
Plate: 1 Lane: 1

Elect Resolution: NORMAL

(Amp. Range: 0 - 2047)

Stop counts: 50000

Stop Counts Region: 0.00 to 20.00 cm

Rf Calculations: Origin: 1.50 cm

Solvent Front: 19.00 cm

Integration Parameters: Auto Integration

Peak slope: 1.0

Min width: 0.1

Min %: 2.0

Total Count Region: 0.00cm to 20.00cm

Total Counts: 53170

Total CPM: 63810

Reg. #	Start (cm)	Stop (cm)	Center (cm)	Rf	Region Counts	Region CPM	% of Tot Reg	% of Tot Cn
1	0.60	4.40	2.50	0.06	4557	5468	9.02	8.5
2	8.20	16.80	12.56	0.63	45980	55180	90.98	86.4
TOTAL					50540	60650	100.00	95.0

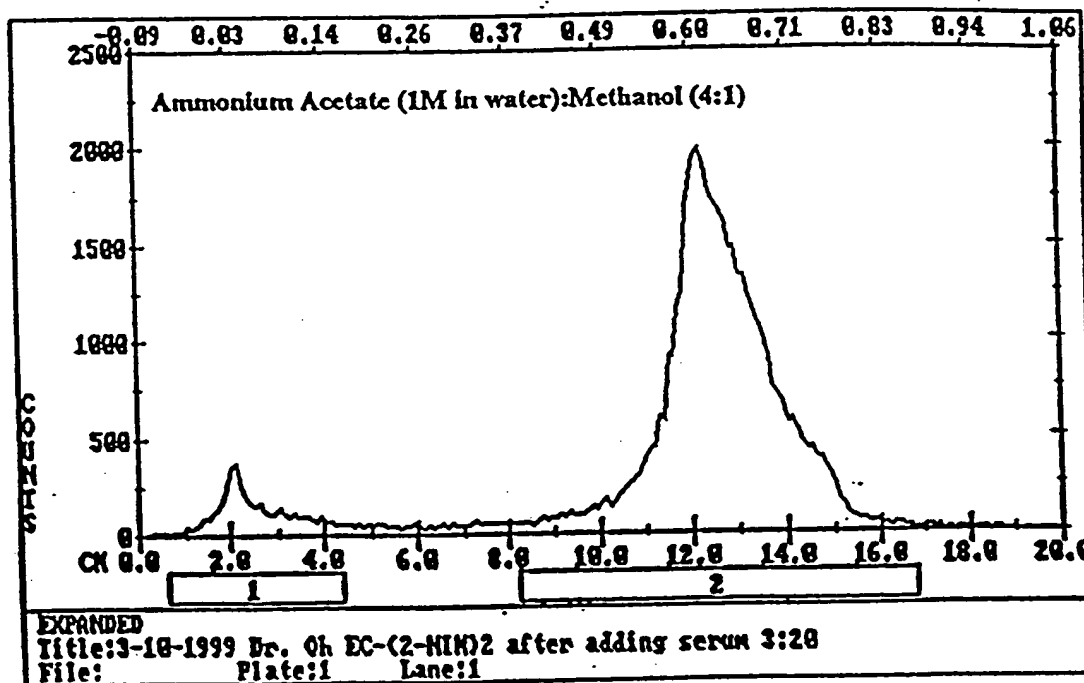
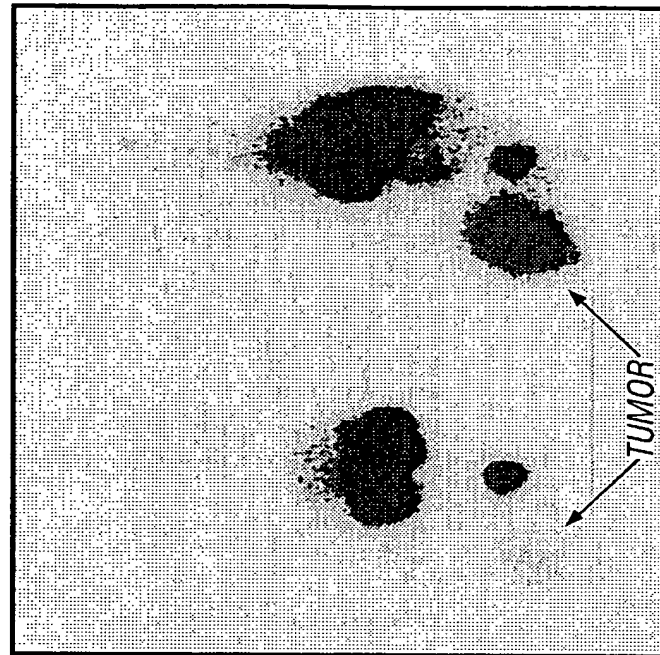


FIG. 13

$^{99m}\text{Tc-EC-NIM}$

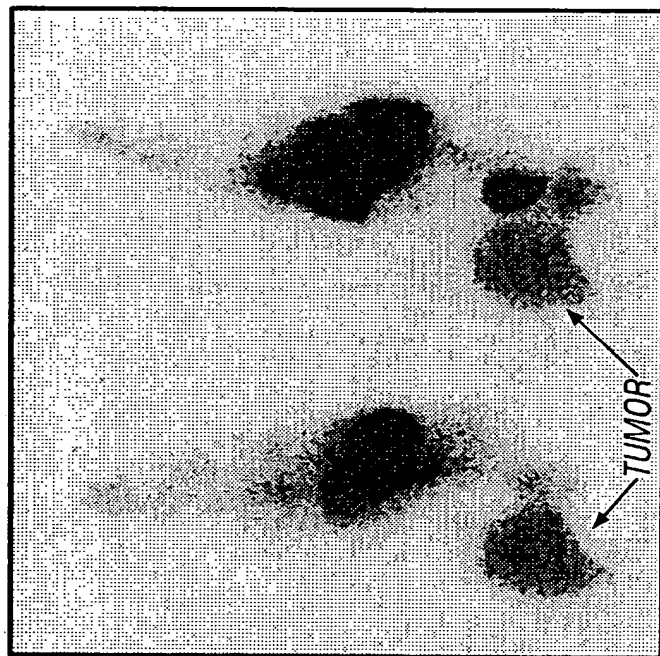
$^{99m}\text{Tc-EC}$



4 HOUR

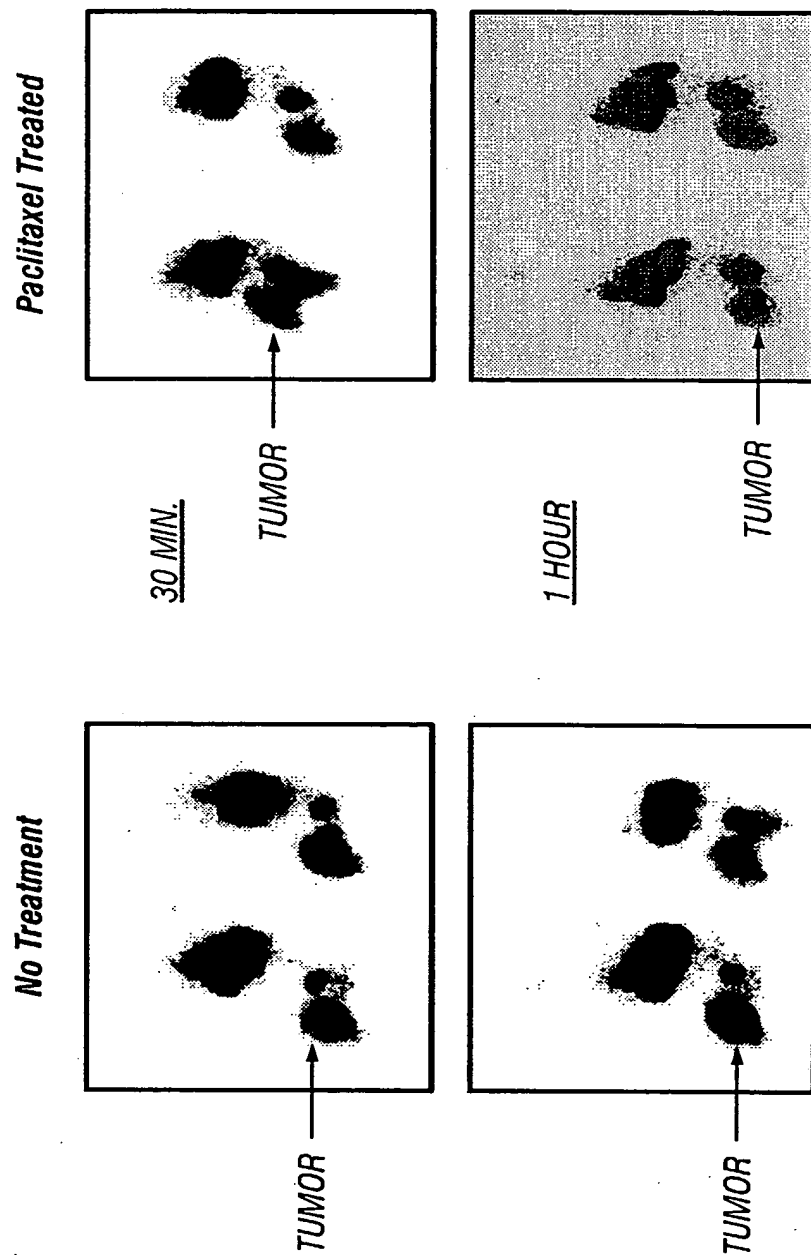
$^{99m}\text{Tc-EC-NIM}$

$^{99m}\text{Tc-EC}$



15 MIN.

**FIG. 14A**



**FIG. 14B**



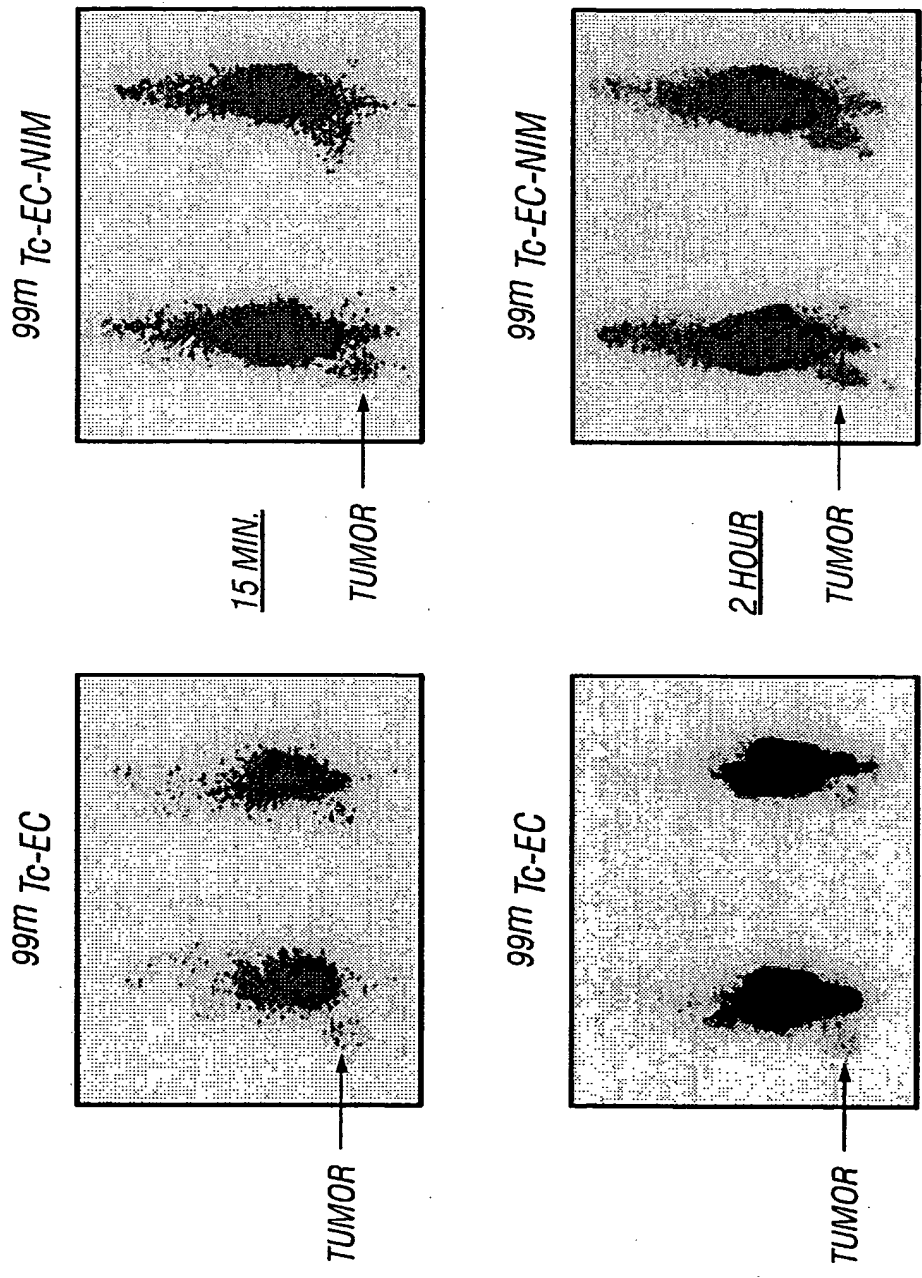
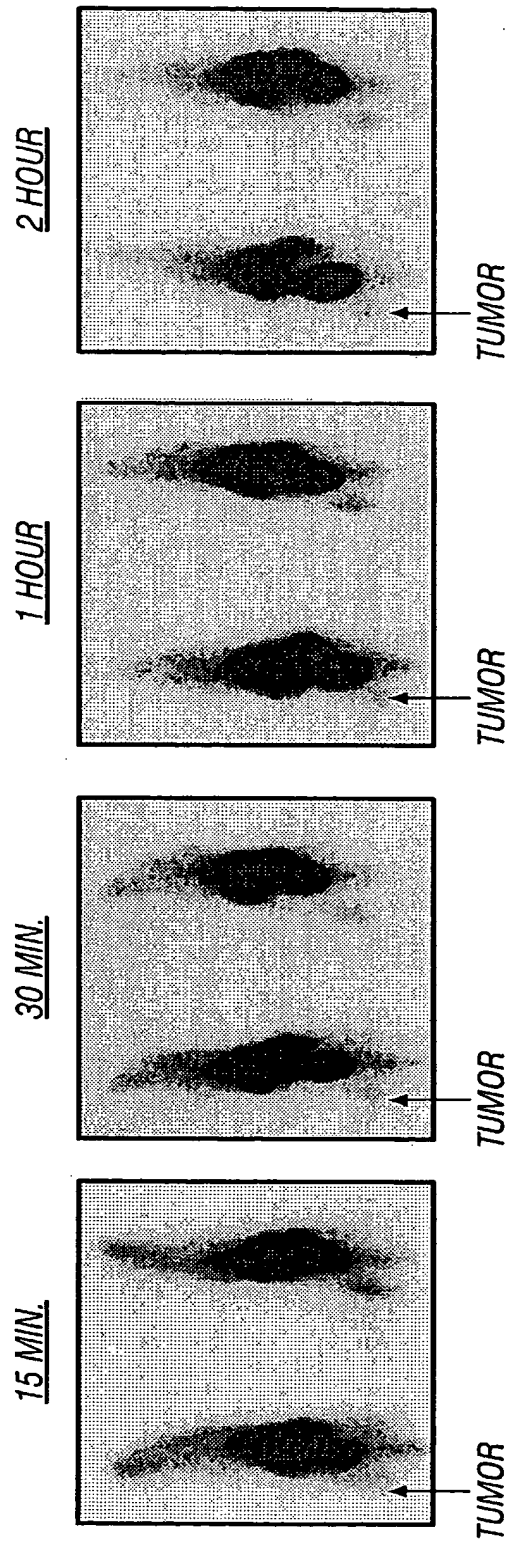


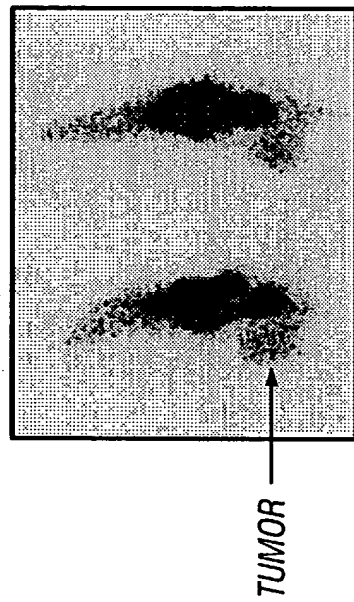
FIG. 15A

***$^{99m}\text{Tc}$ -EC-Nitroimidazole (NIM)  
(100 $\mu\text{Ci}$ /mouse, iv.)***

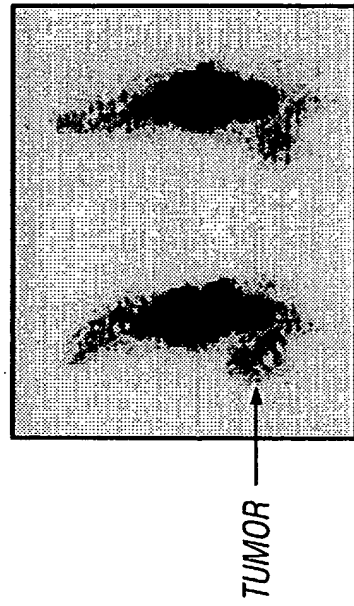


**FIG. 15B**

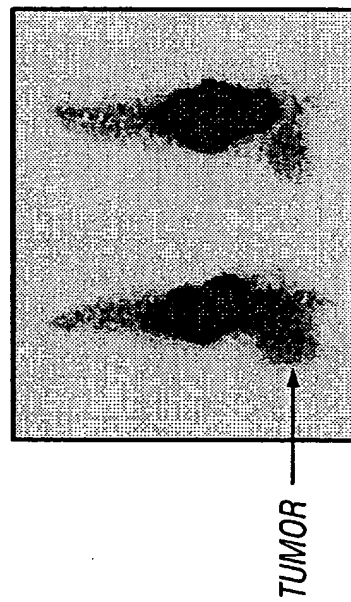
***$^{99m}\text{Tc}$ -EC-Nitroimidazole (NIM)***



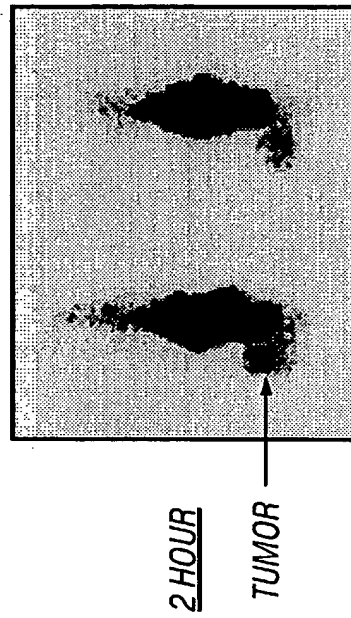
15 MIN.



30 MIN.



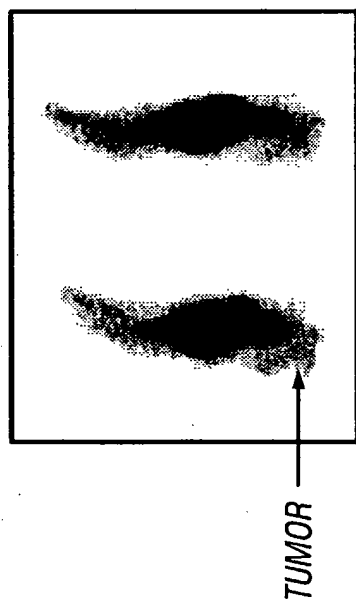
1 HOUR



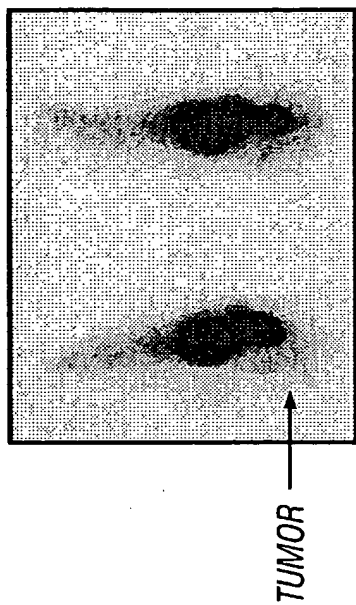
2 HOUR

**FIG. 15C**

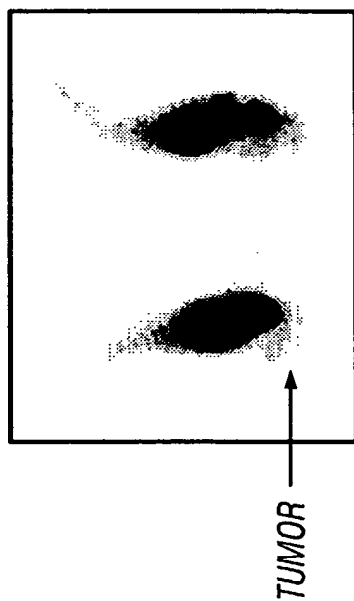
*<sup>99m</sup>Tc-EC-Nitroimidazole (NIM)  
(100 $\mu$ Ci/mouse, iv.)*



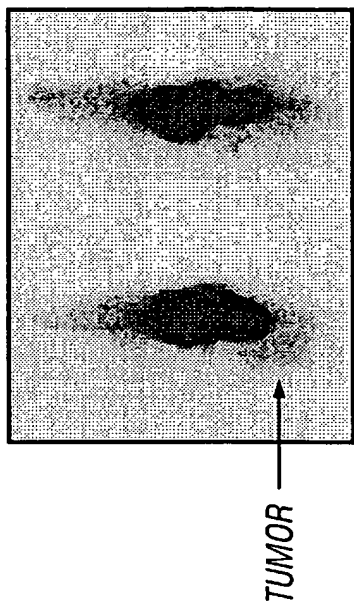
15 MIN.



30 MIN.

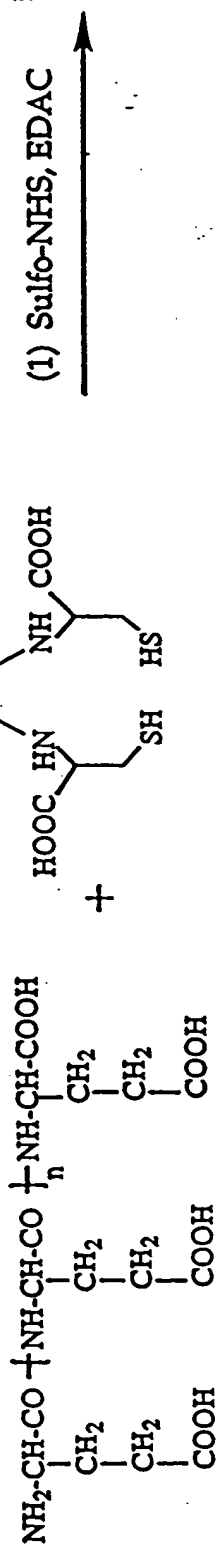


1 HOUR



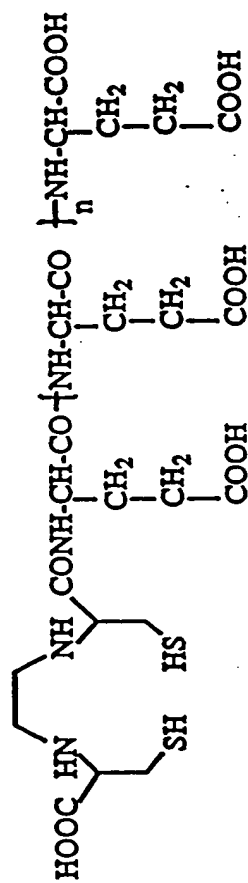
2 HOUR

**FIG. 15D**



L-GAP

EC

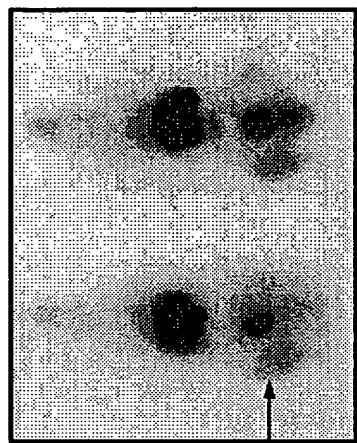


EC-GAP

Synthesis of EC-GAP

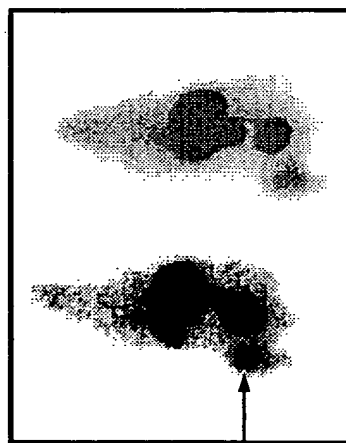
FIG.

16



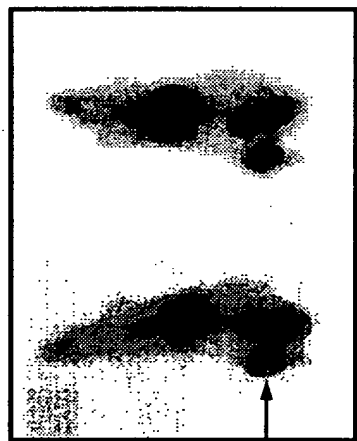
30 MIN.

TUMOR



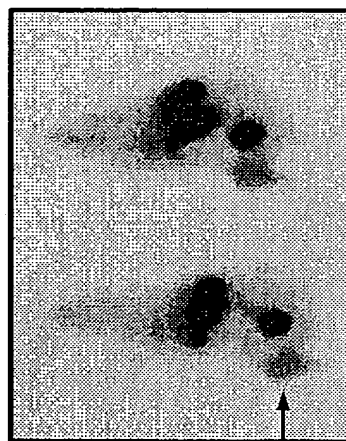
2 HOUR

TUMOR



15 MIN.

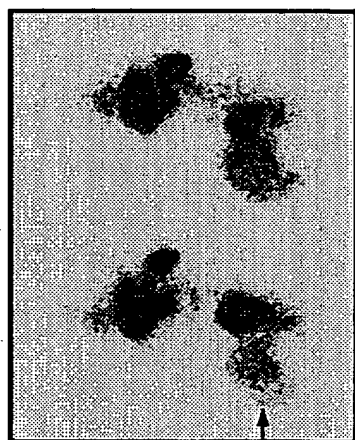
TUMOR



1 HOUR

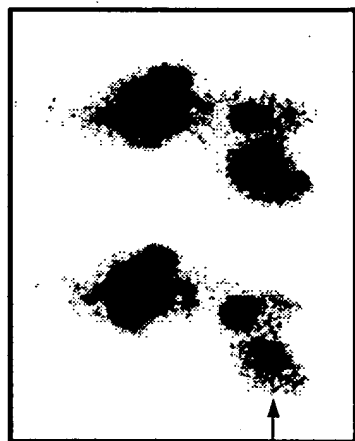
TUMOR

**FIG. 17**



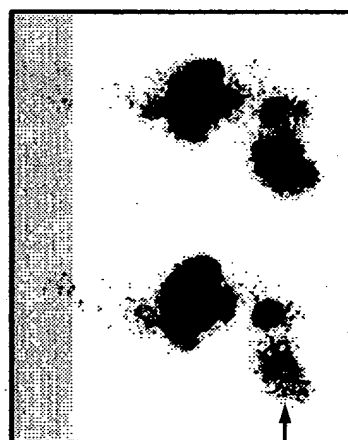
TUMOR

15 MIN.



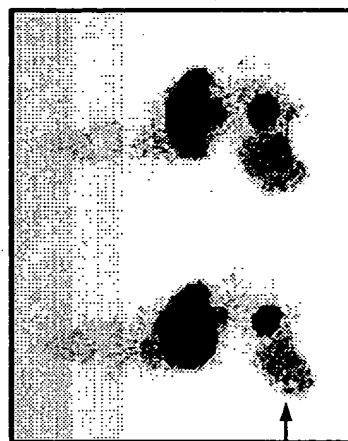
TUMOR

30 MIN.



TUMOR

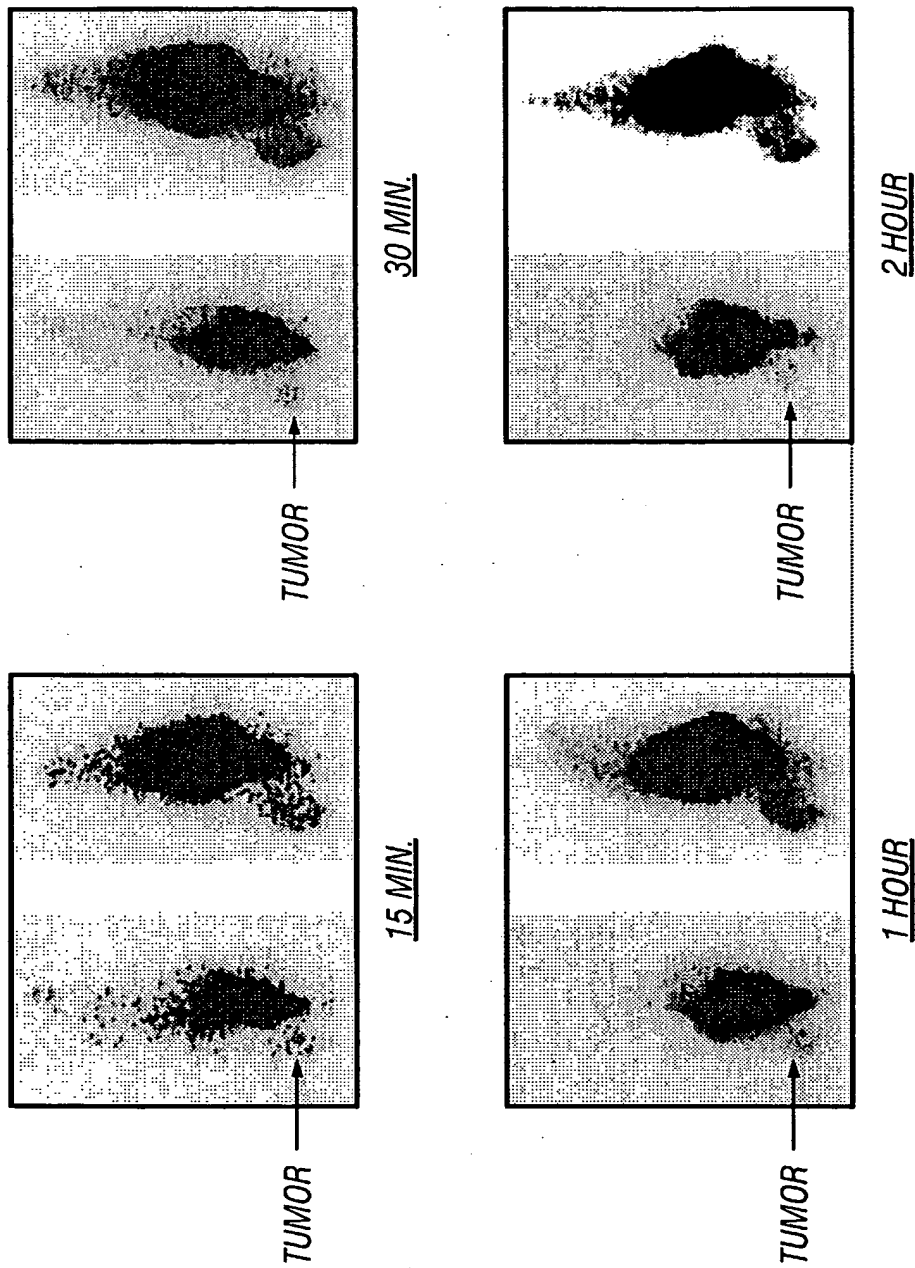
1 HOUR



TUMOR

2 HOUR

FIG. 18

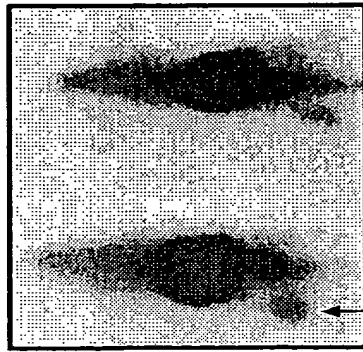


**FIG. 19A**

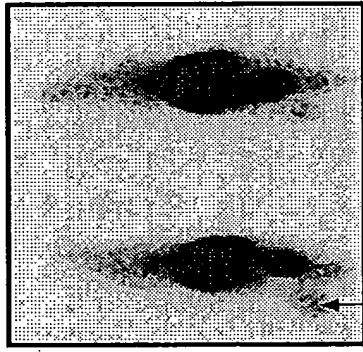


$^{99m}\text{Tc}$ -EC-Annexin V  
(100  $\mu\text{Ci}$ /mouse, iv.)

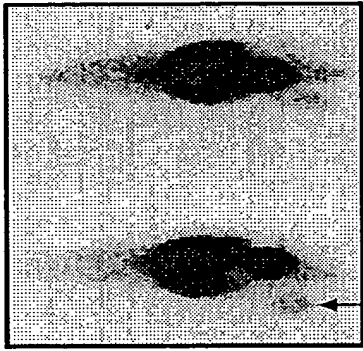
15 MIN.



30 MIN.



1 HOUR



2 HOUR

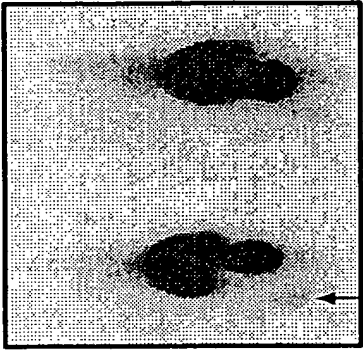


FIG. 19B

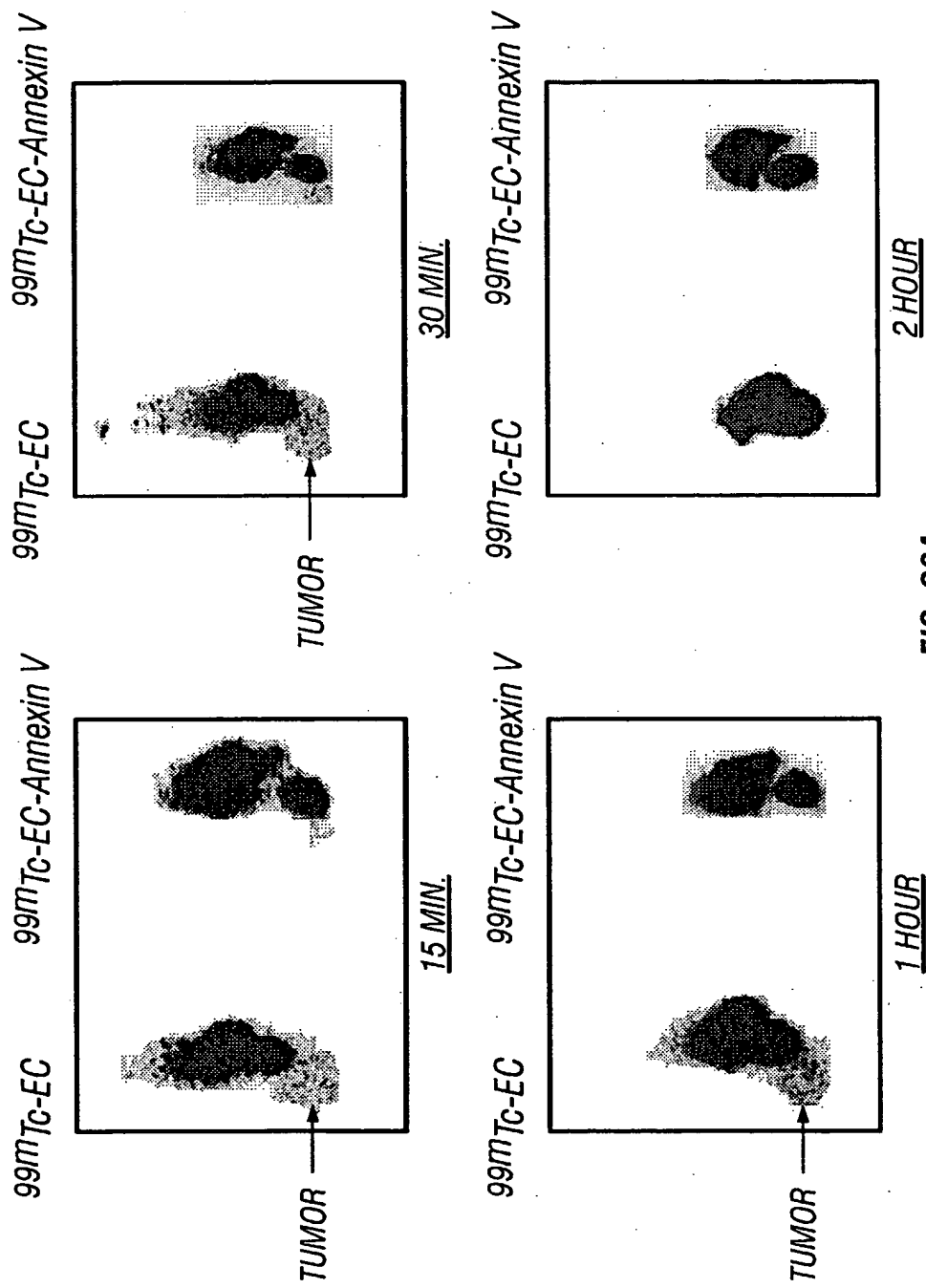
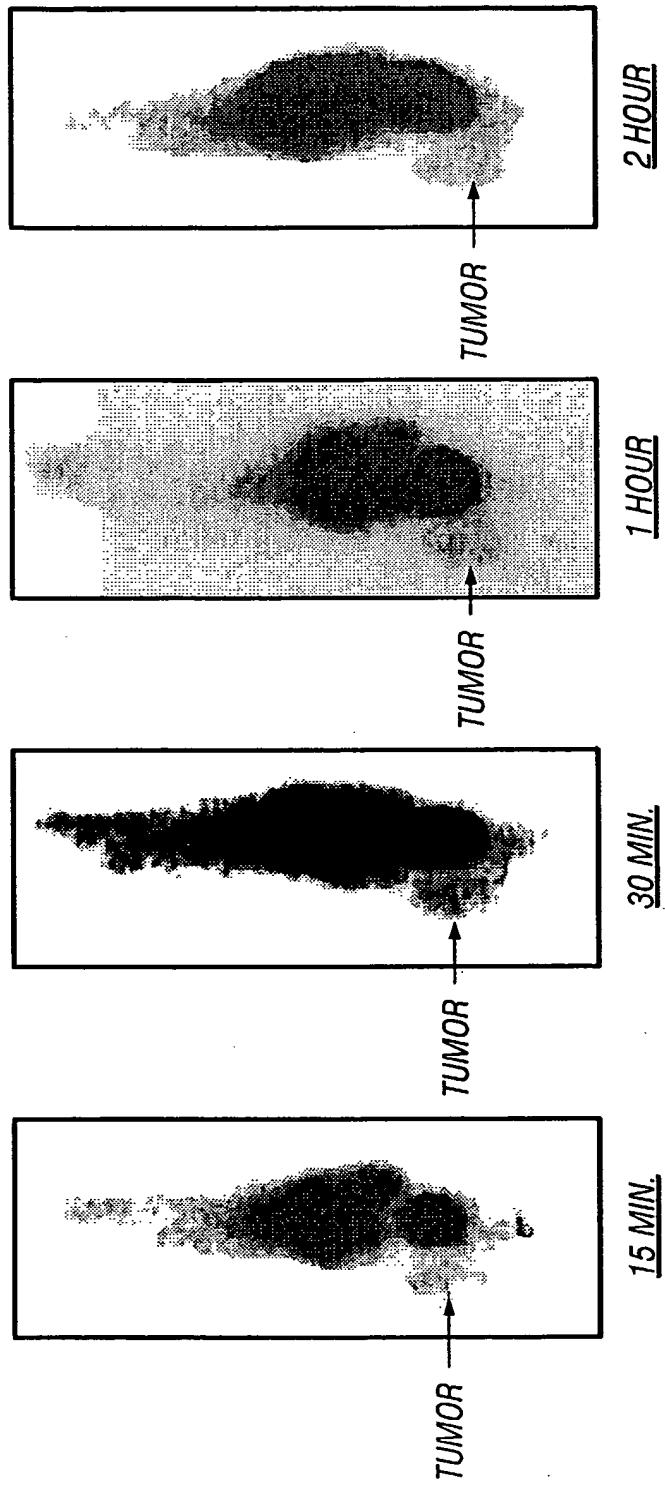


FIG. 20A



**FIG. 20B**

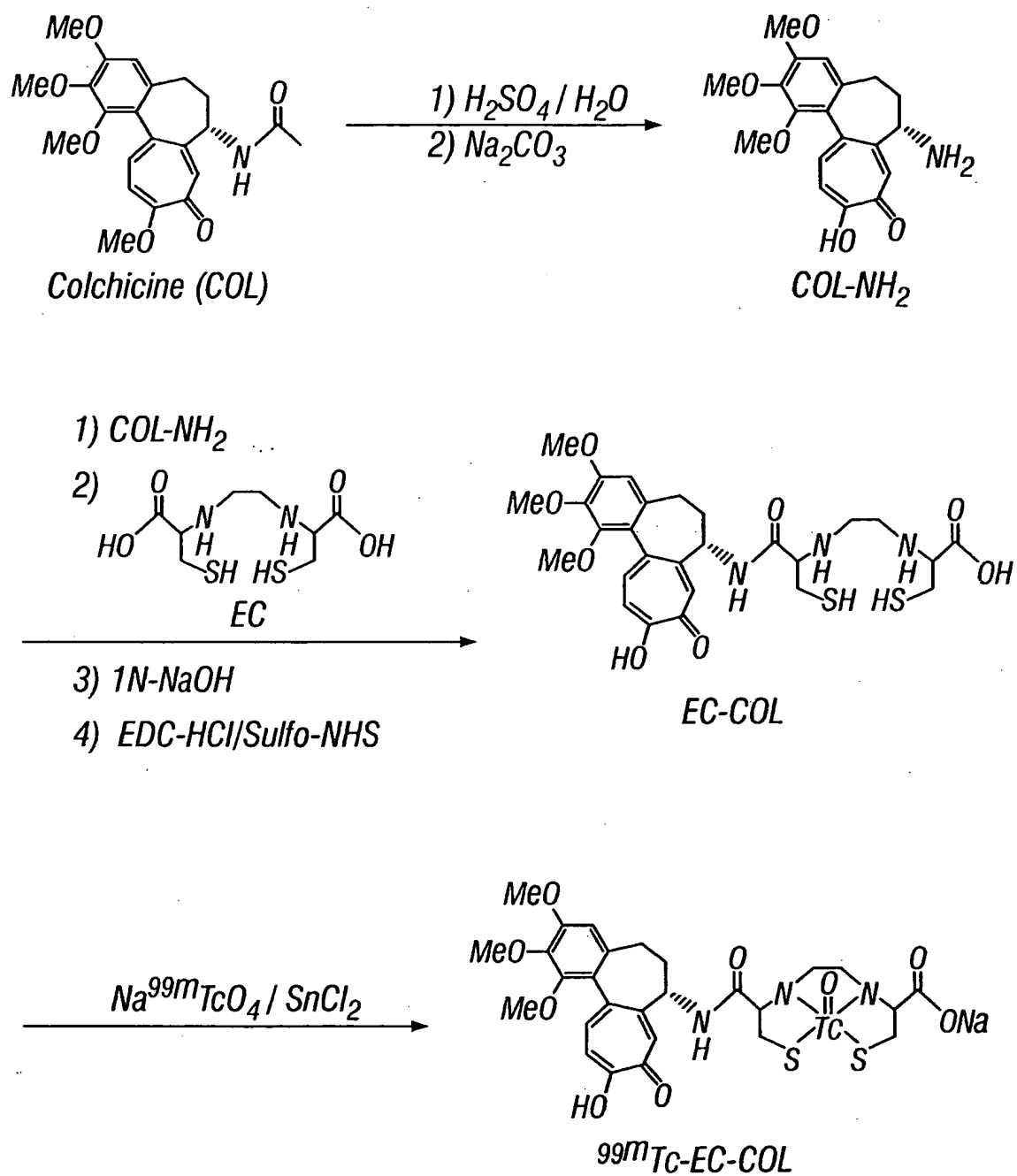


FIG. 21

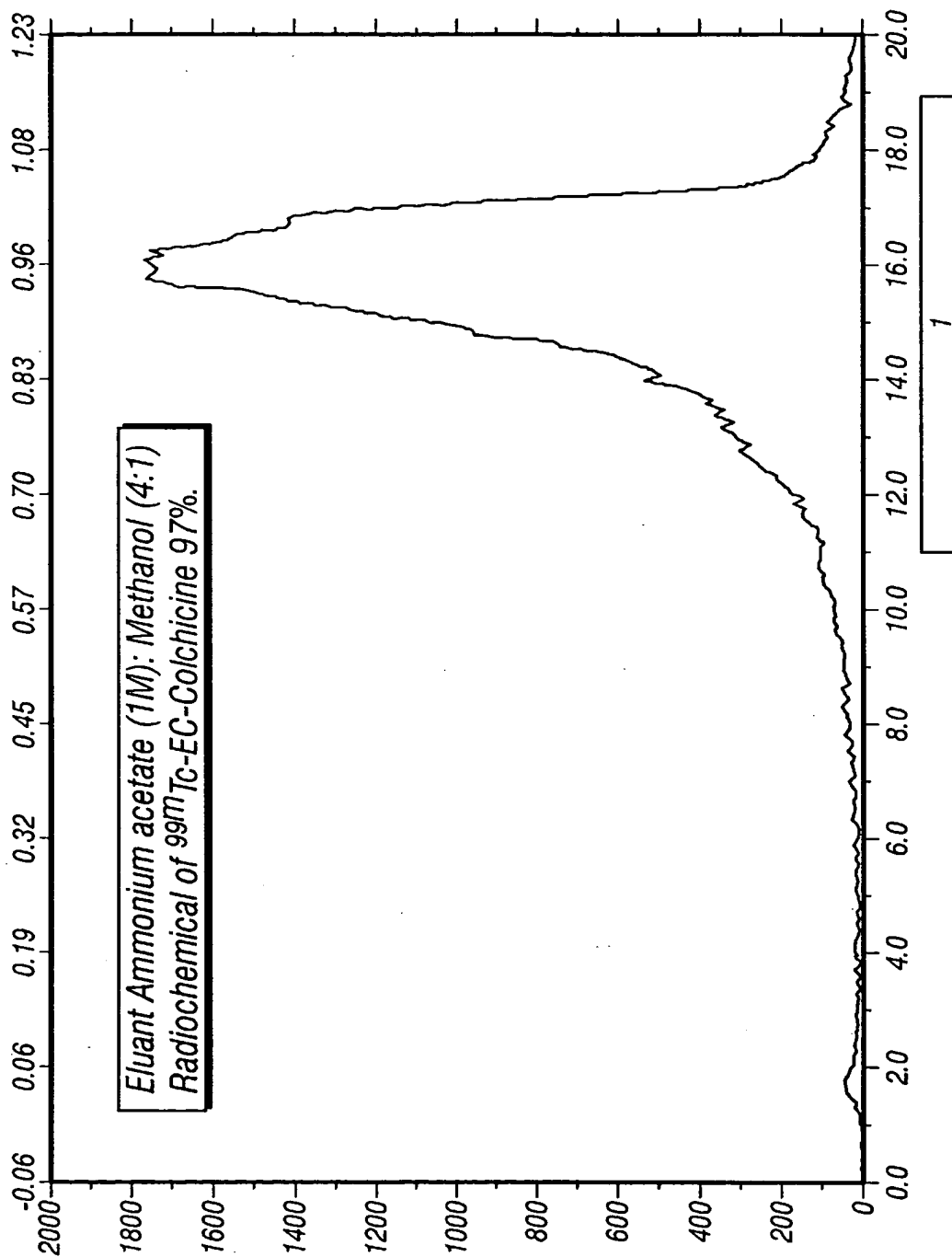


FIG. 22

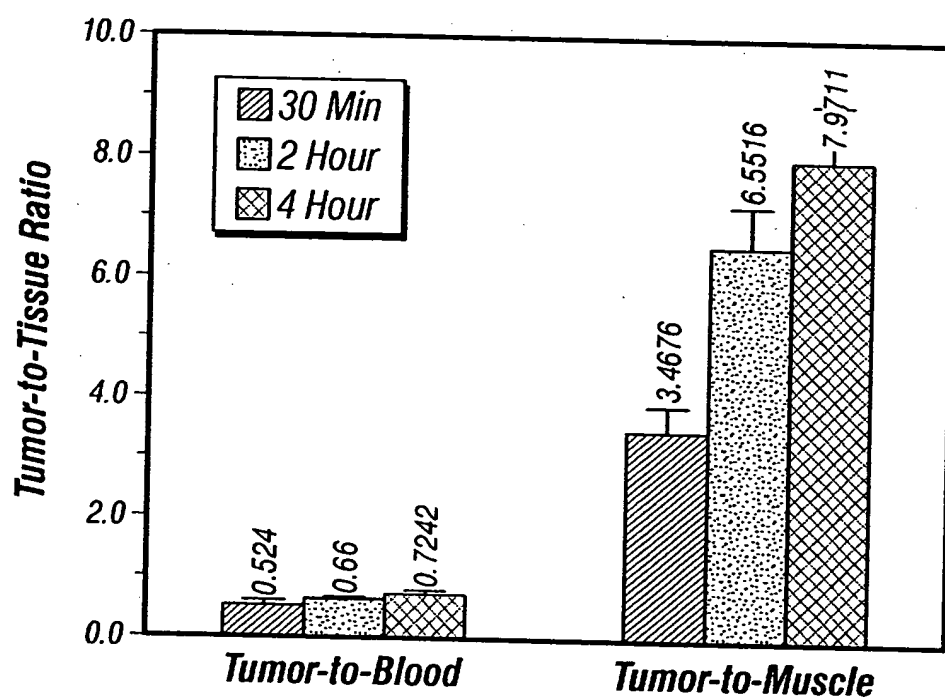


FIG. 23

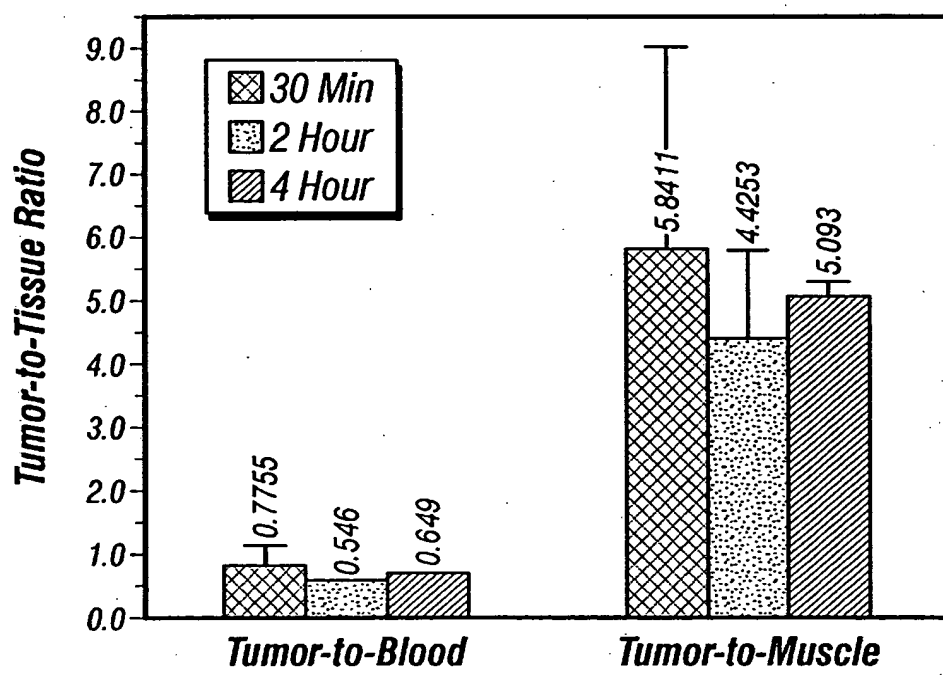
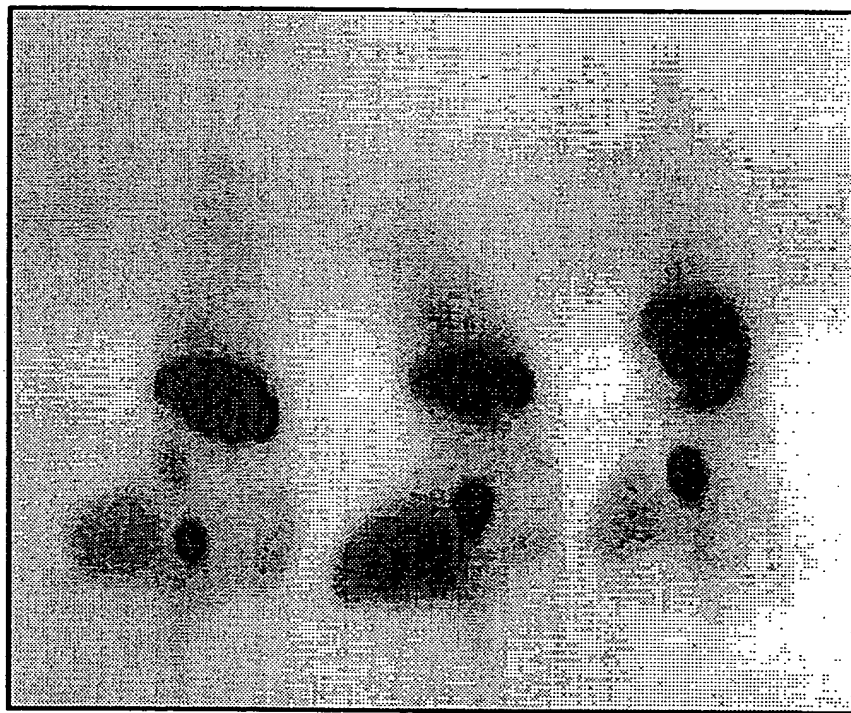
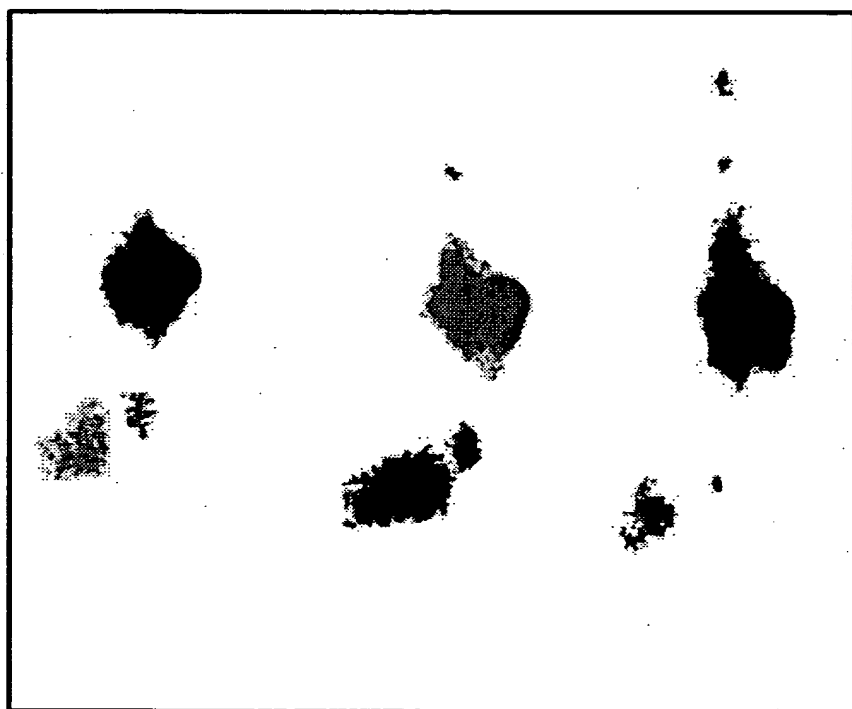


FIG. 24



**FIG. 25**





**FIG. 26**

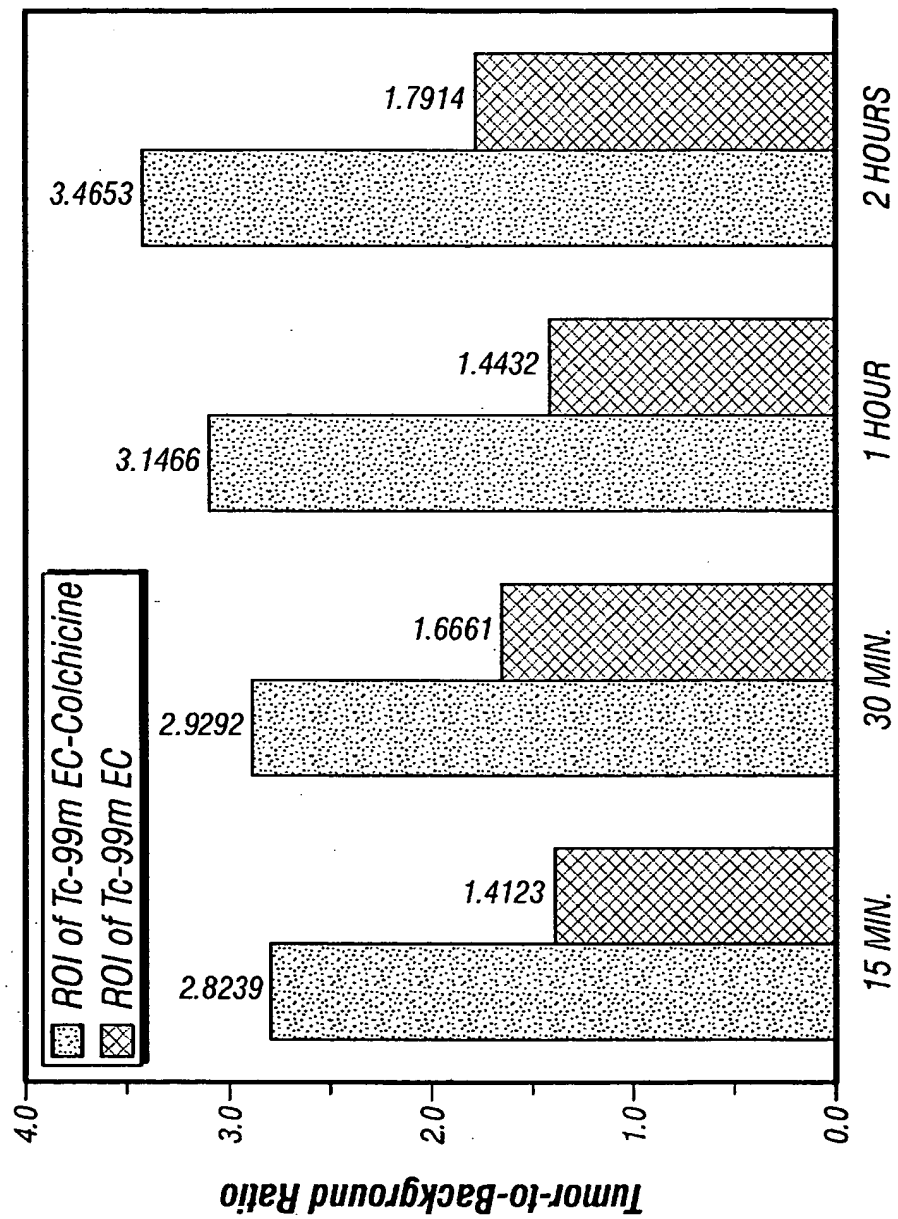
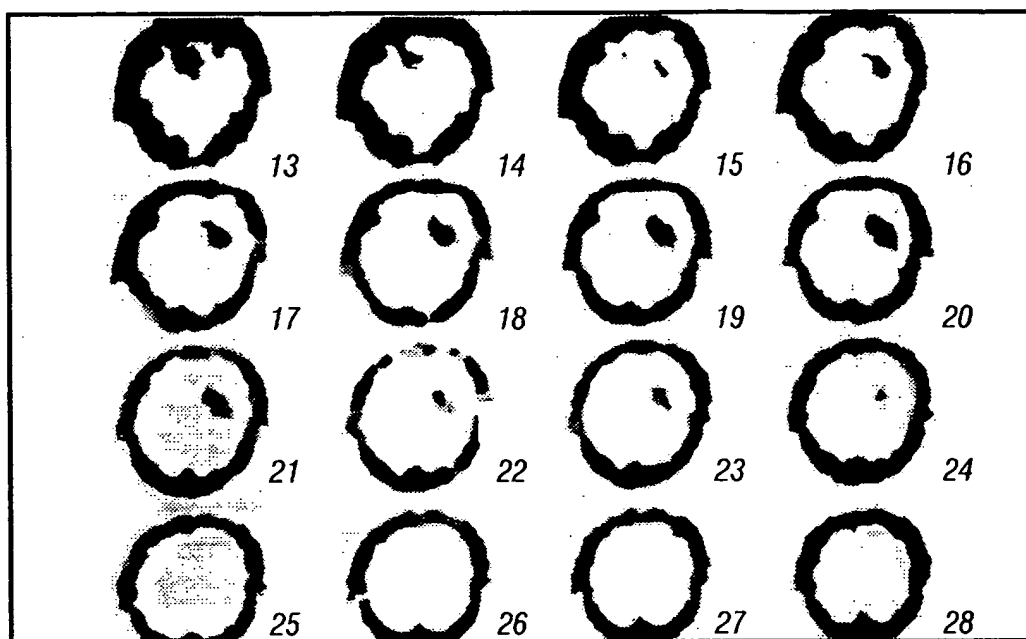
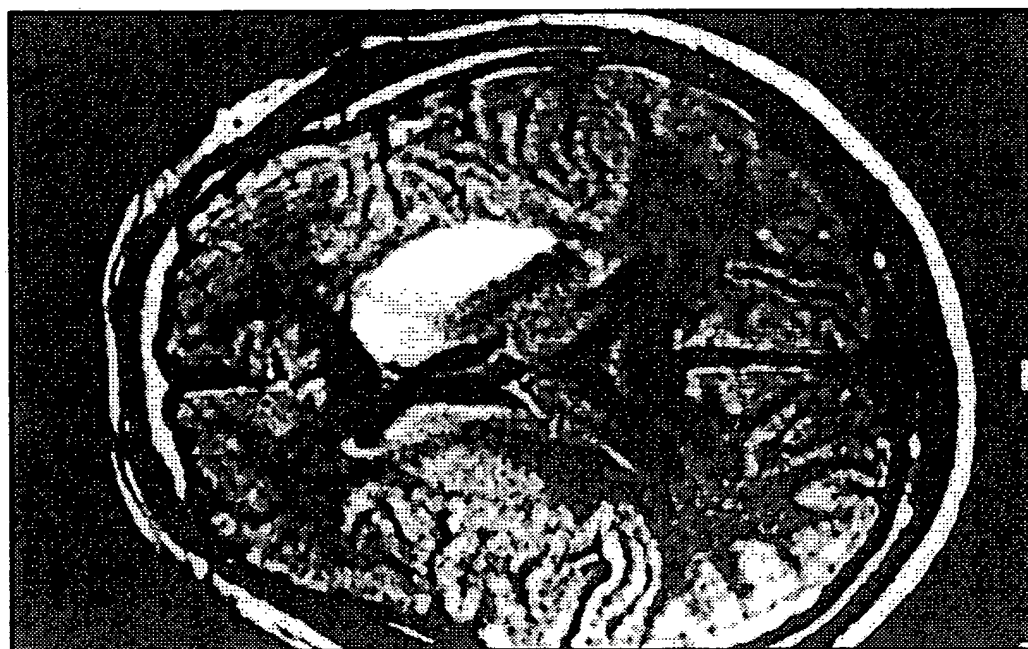


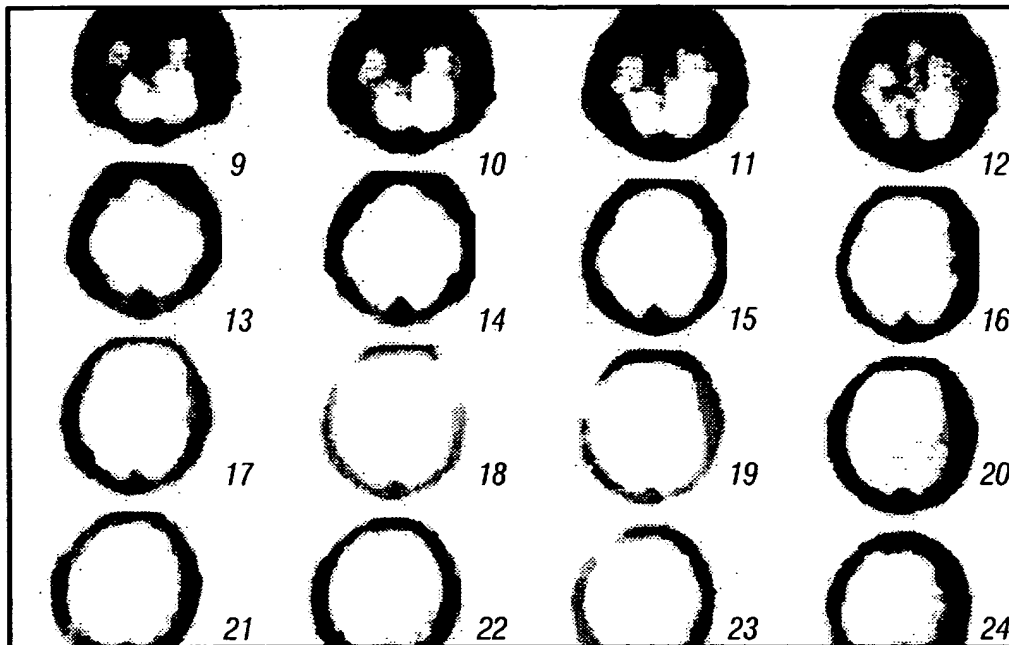
FIG. 27



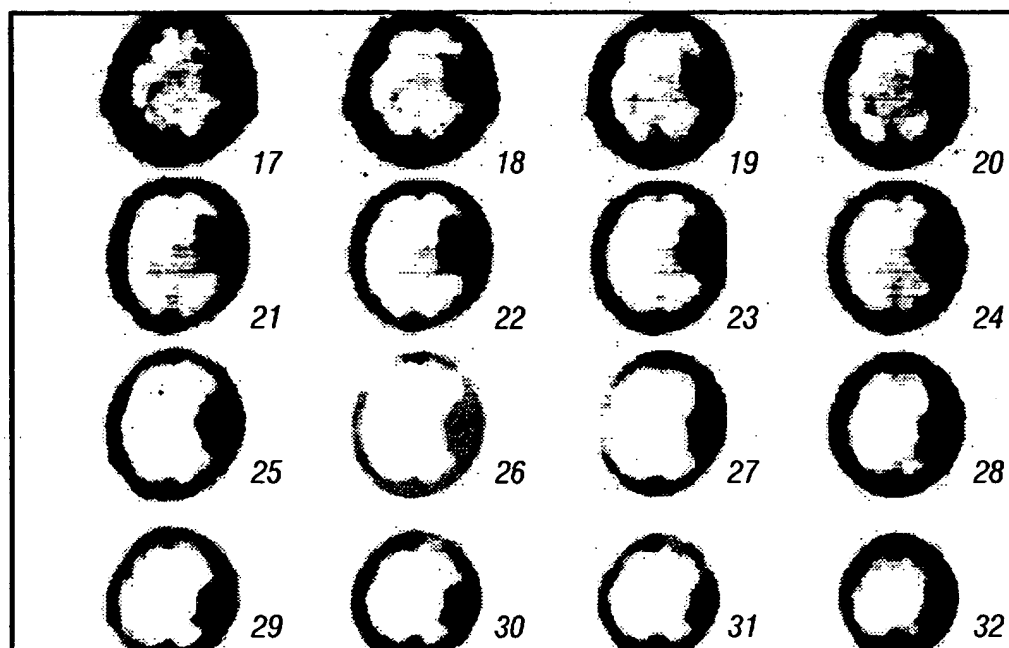
**FIG. 28**



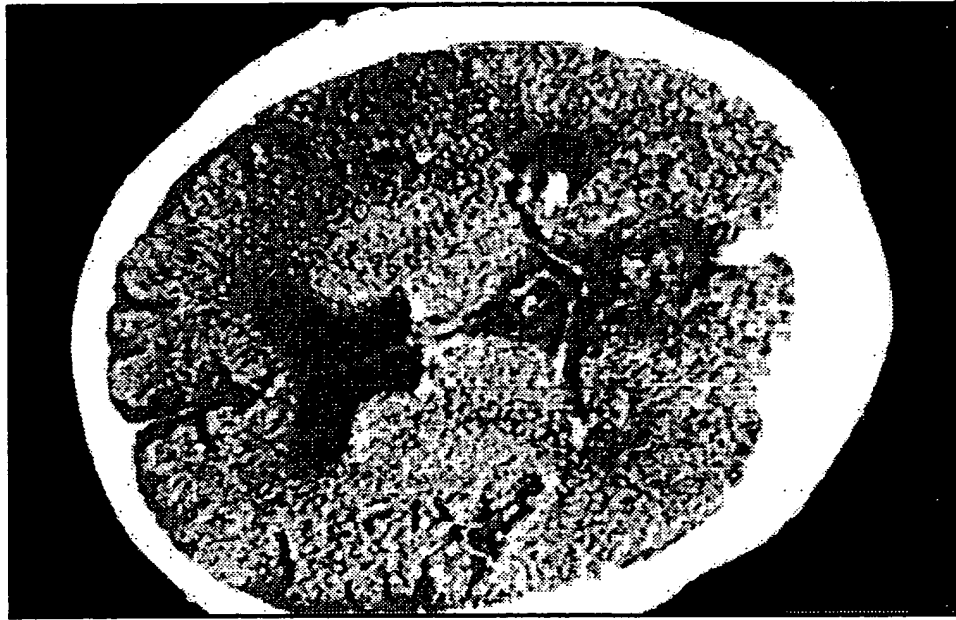
**FIG. 29**



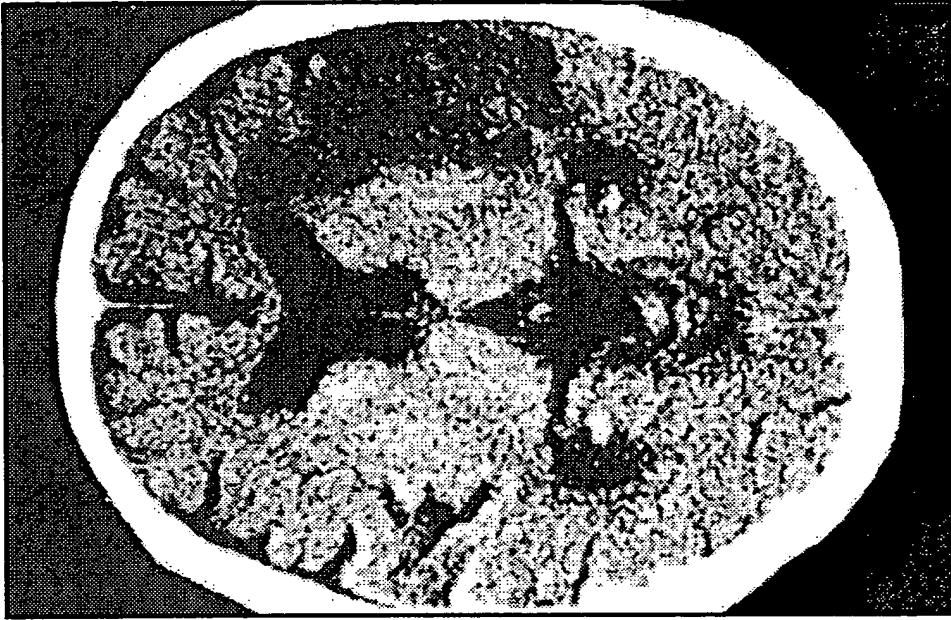
**FIG. 30**



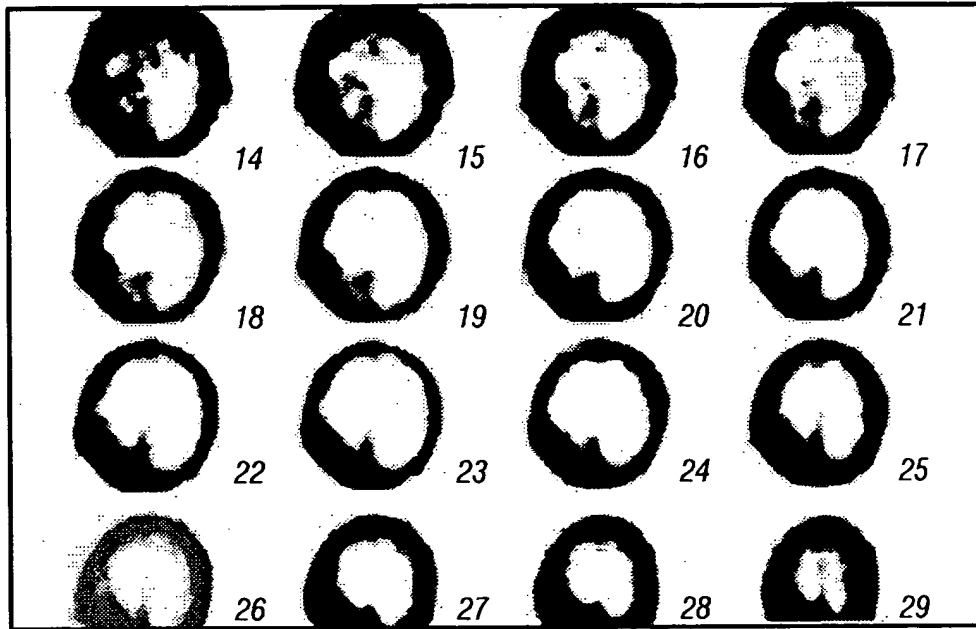
**FIG. 31**



**FIG. 32**



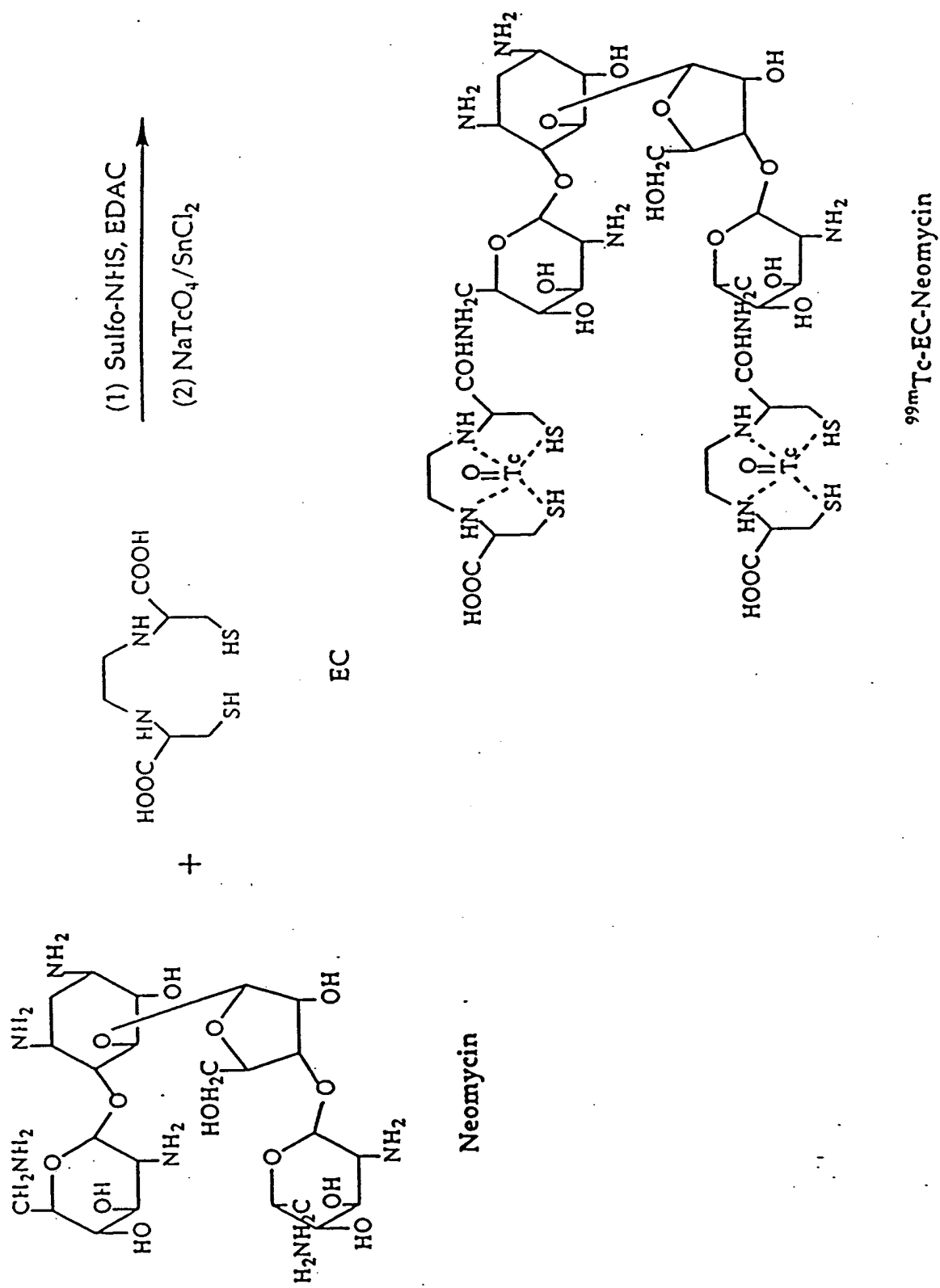
**FIG. 33**



**FIG. 34**



**FIG. 35**

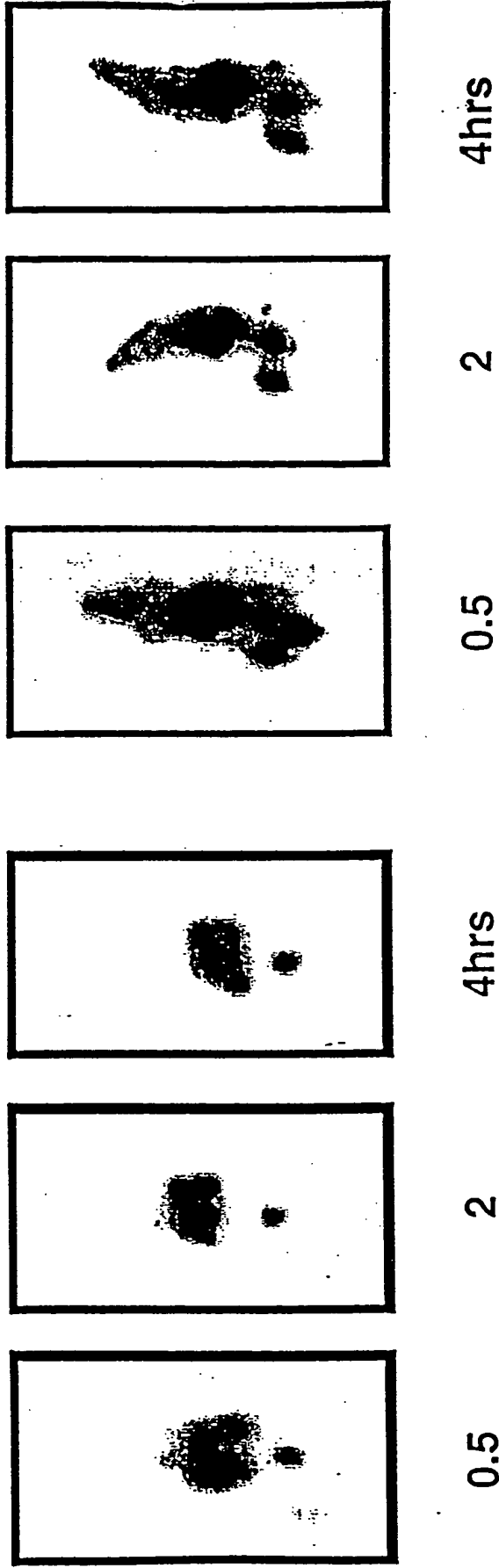


Synthetic scheme of  $^{99m}\text{Tc}$ -EC-neomycin.

FIG. 36

# **$^{99m}\text{Tc-EC}$**

# **$^{99m}\text{Tc-EC-Neomycin}$**



Planar image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-Neomycin}$  (100  $\mu\text{Ci/rat}$ , iv.) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

**FIG. 37A**  
 Scintigraphic image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-Neomycin}$  (100  $\mu\text{Ci/rat}$ , iv.) showed that the tumor could be well visualized from 0.5-4 hours postinjection.



7537175568

**06062000**

WONKWANG UNIV HOSP

SCINTIMAMMOGRAPHY EC-NEO



**SRRT LAT-2H**

LT LAT-2B

**RT LAT-2H**

Scintimammography with  $^{99m}\text{Tc}$ -EC- neomycin (30 mCi, iv.) of a breast cancer patient. Images taken two hours post-injection.

EC

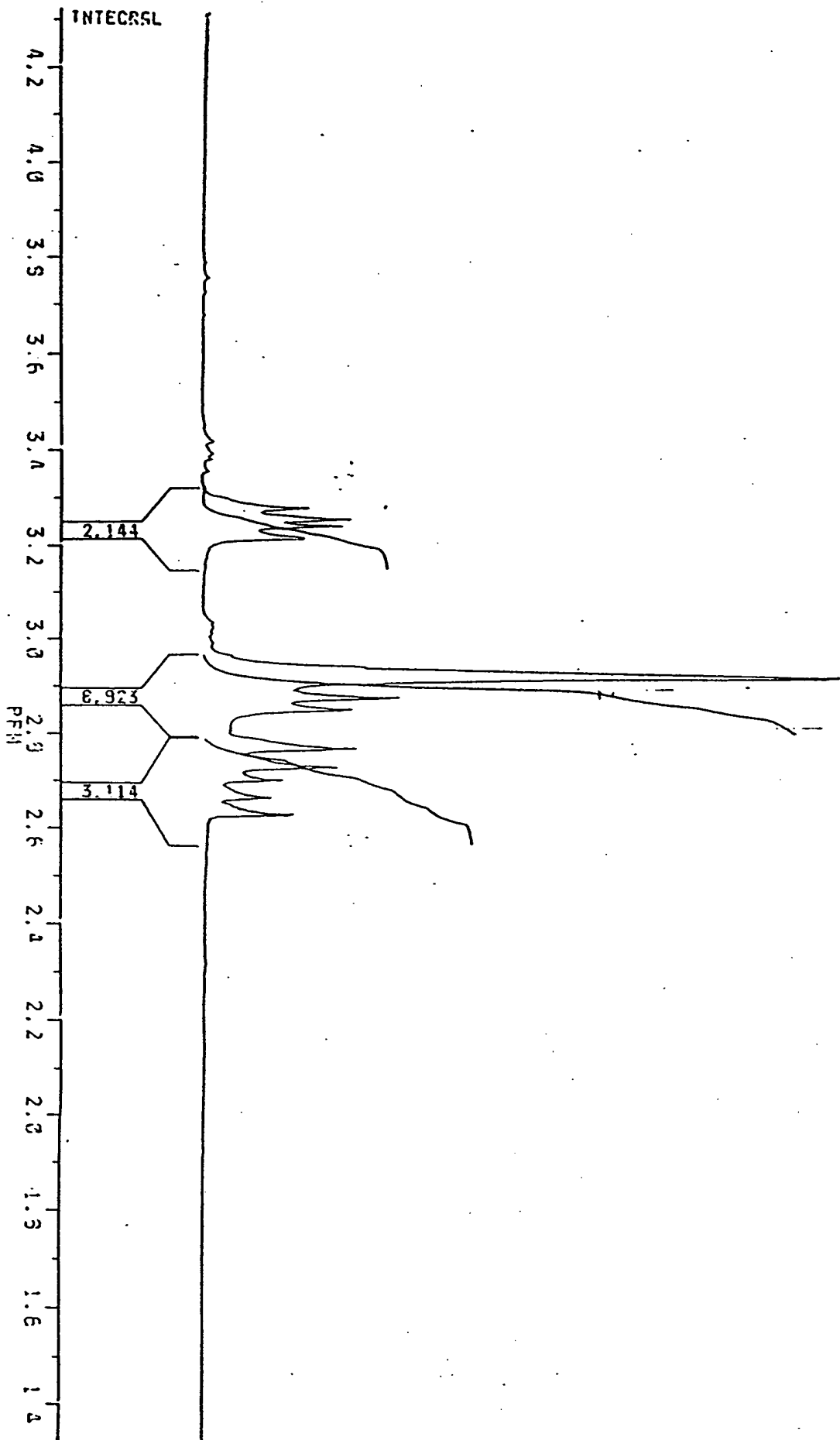


FIG. 38A

${}^1\text{H}$ -NMR of EC.

Neomycin

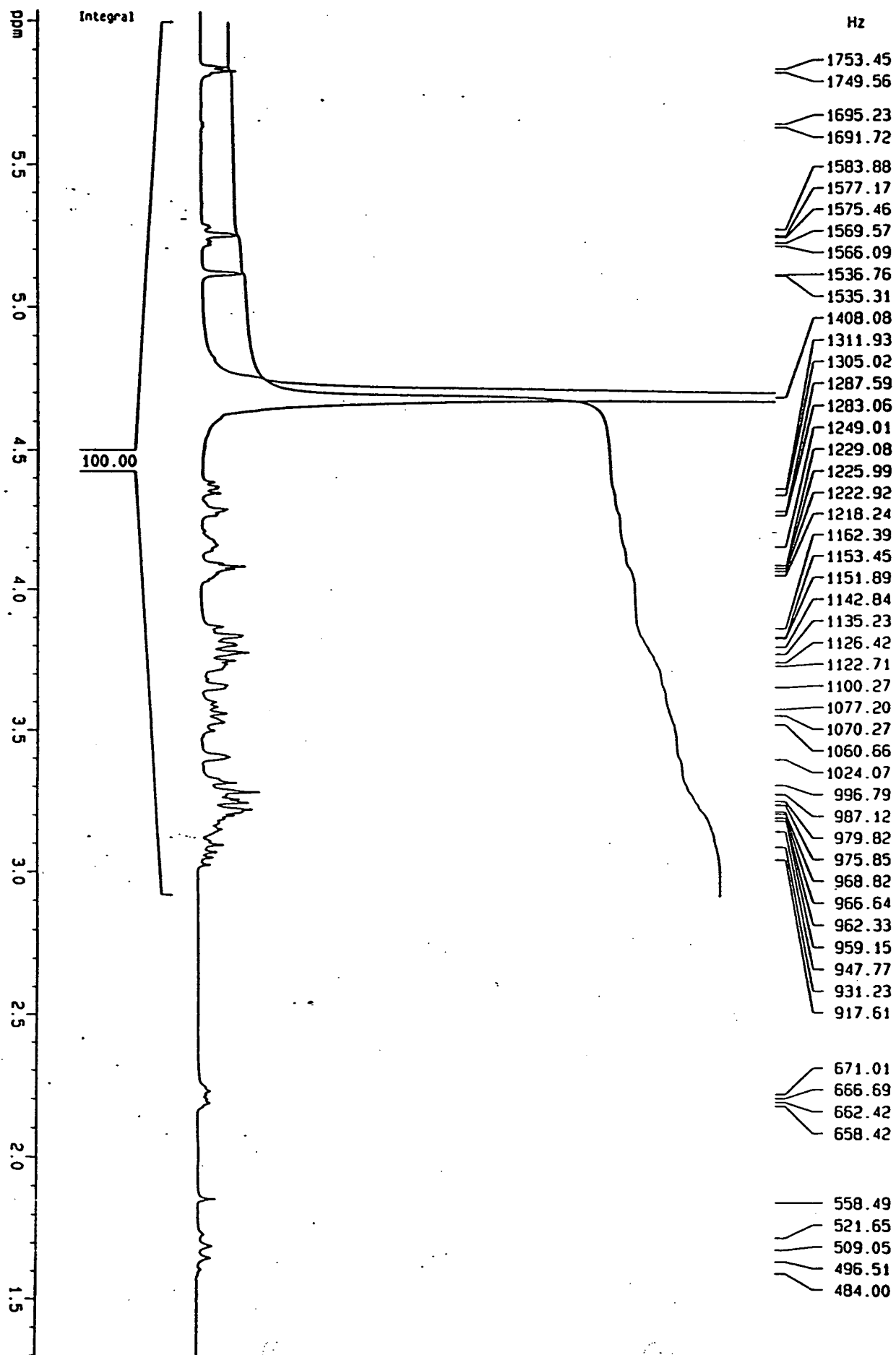


FIG. 38B

$^1\text{H}$ -NMR of neomycin.

EC-Neomycin

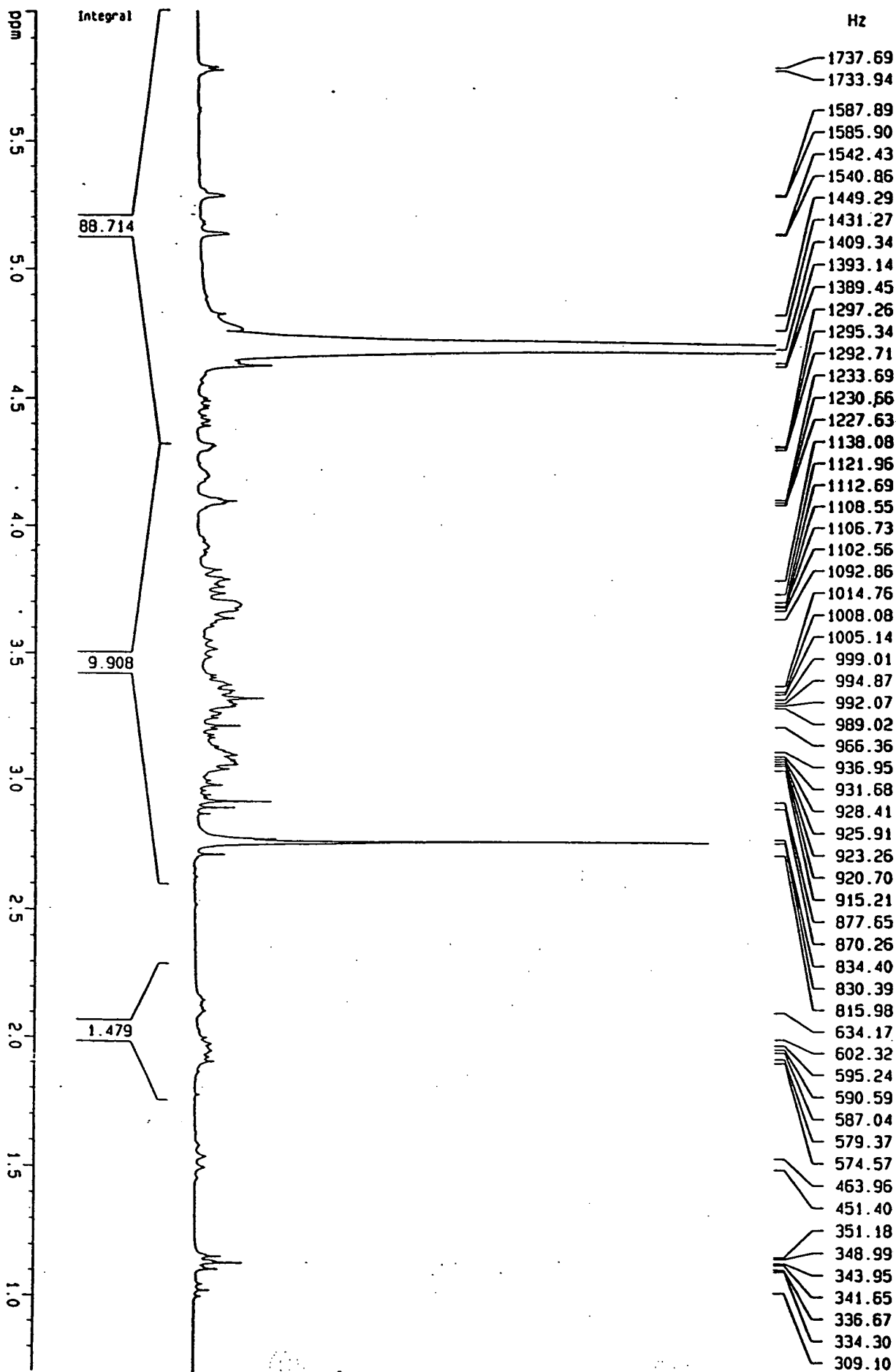


FIG. 38C

<sup>1</sup>H-NMR of EC-neomycin.

# EC-Neo 10mmml/50mmml 101113

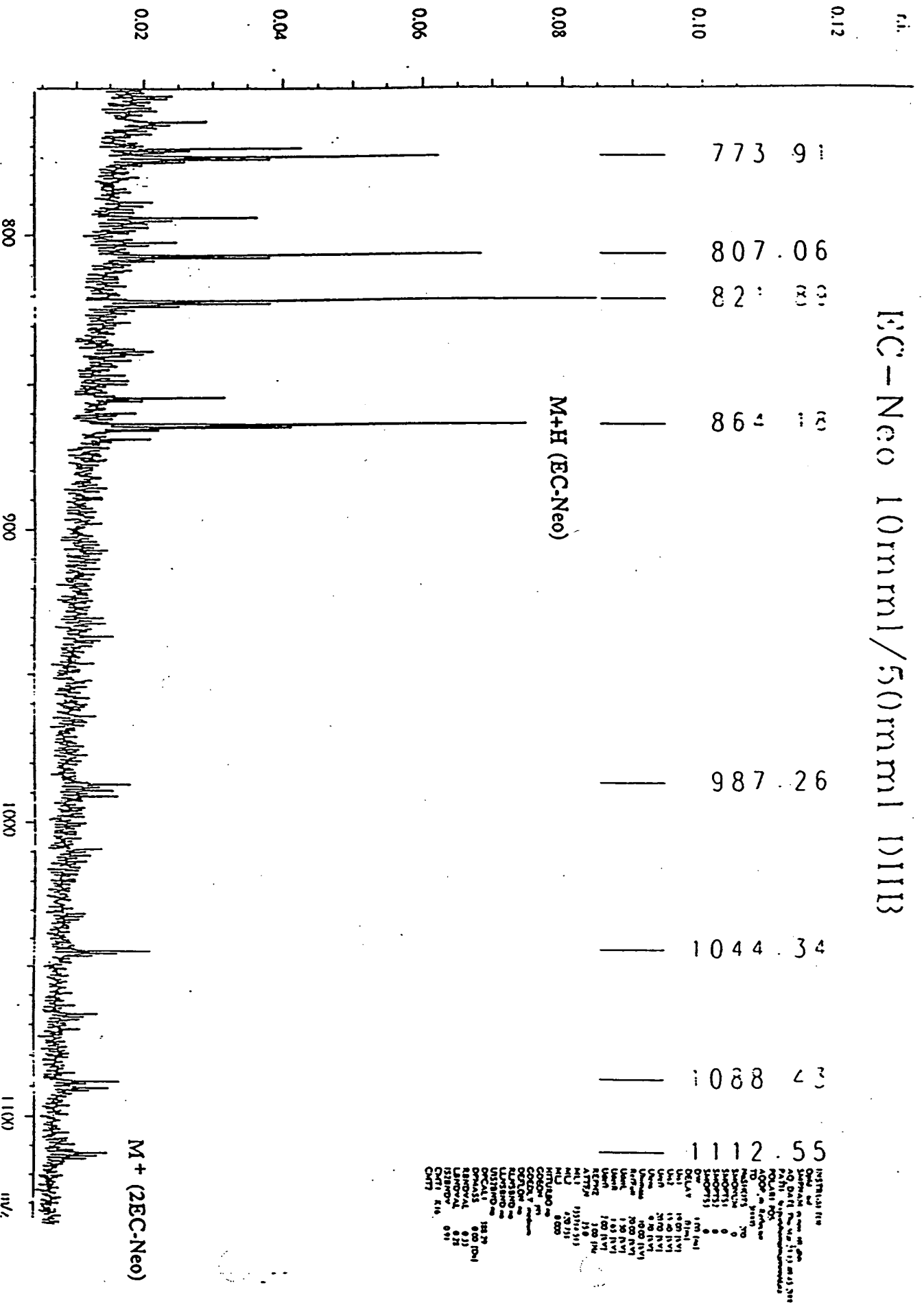


FIG. 39 Mass spectrometry of EC-neomycin (M<sup>+</sup> 1112.55).

## UV Wavelength Scan of EC

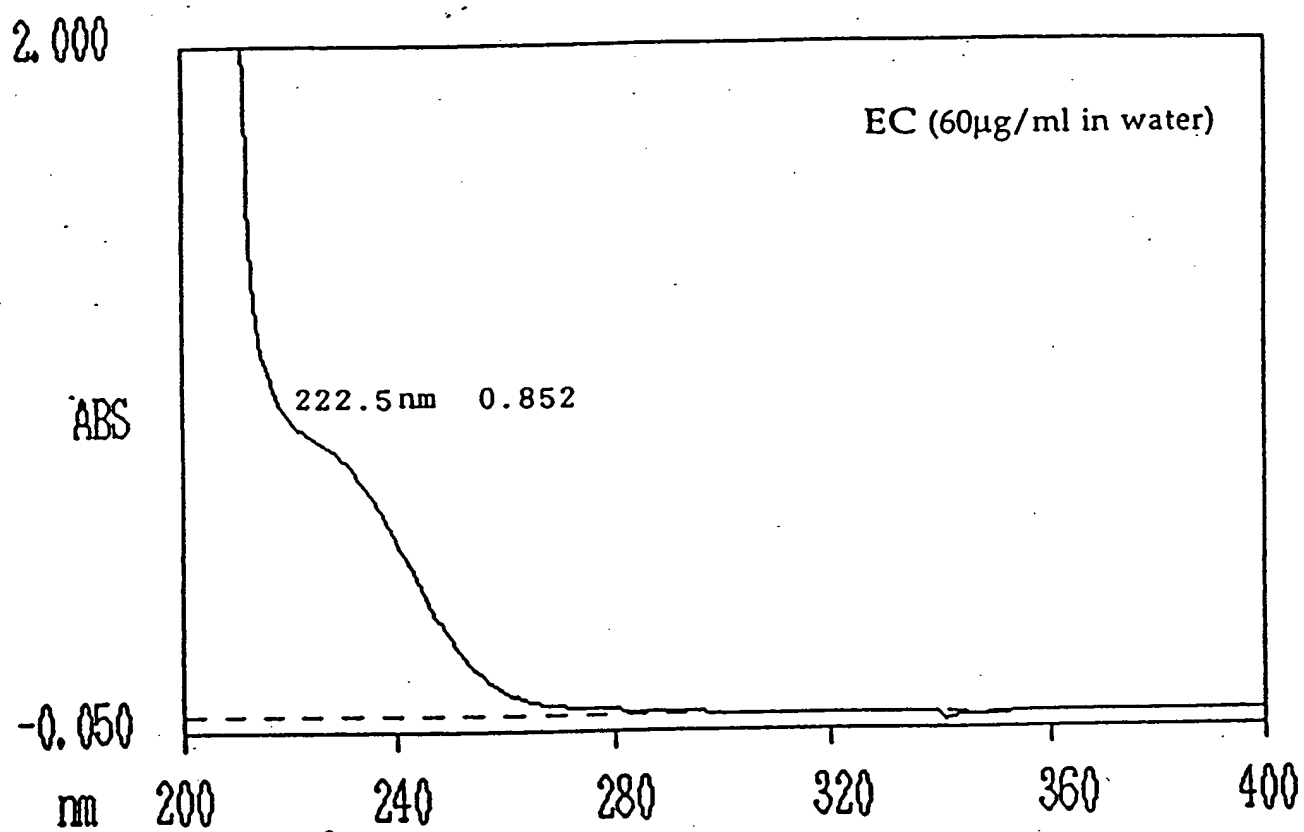


FIG. 40A

UV wavelength scan of EC.

## UV Wavelength Scan of Neomycin

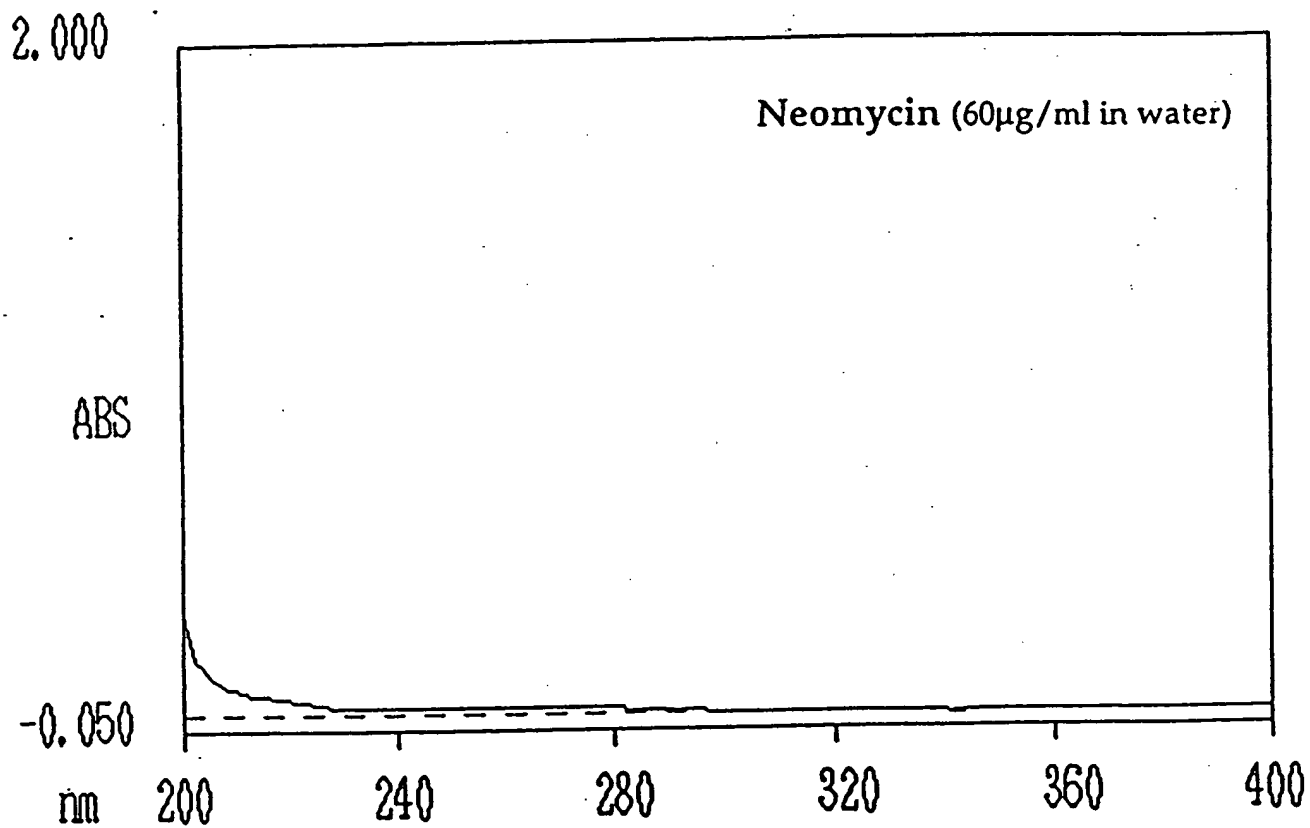


FIG. 40B

UV wavelength scan of neomycin.

## UV Wavelength Scan of EC-Neomycin

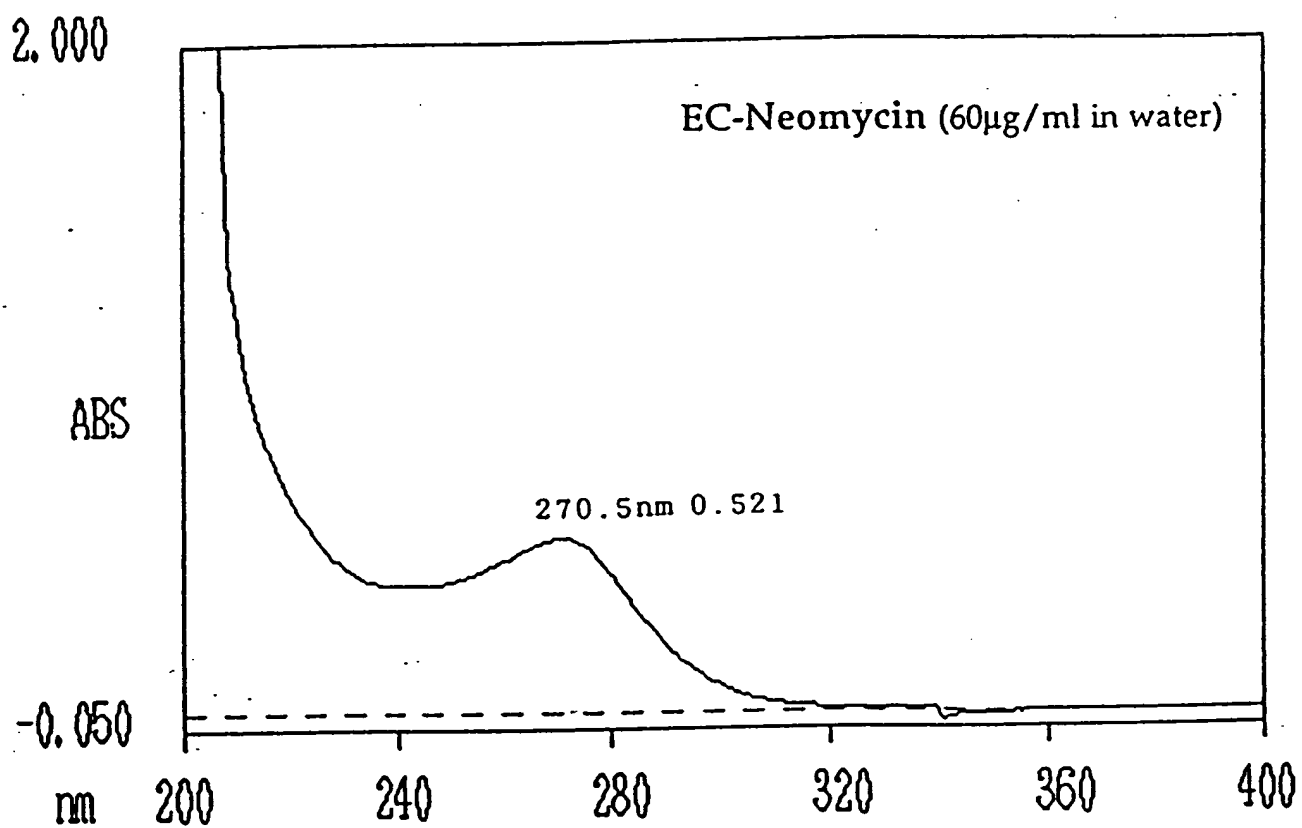


FIG. 40C

UV wavelength scan of EC-neomycin.



# SUMMARY REPORT

EC-NEOMYCIN 30mg + EC

Tc-99m

METHANOL-AMMONIUM ACETATE

Date: Feb 03 2000

Start time: 12:45

Accum time: 00:03:01

Data File:

Plate: 1 Lane: 1

Elect Resolution: NORMAL

(Amp. Range: 0 - 2047)

Rf Calculations: Origin: 0.00 cm

Solvent Front: 20.00 cm

Integration Parameters: Auto Integration

Peak slope: 1.0

Min width: 0.1

Min %: 2.0

Total Count Region: 0.00cm to 20.00cm

Total Counts: 48360

Total CPM: 16030

Reg. #	Start (cm)	Stop (cm)	Center (cm)	Rf	Region Counts	Region CPM	% of Tot Reg	% of Tot Cnt
1	6.50	14.90	10.57	0.53	45000	14920	100.00	93.05
TOTAL					45000	14920	100.00	93.05

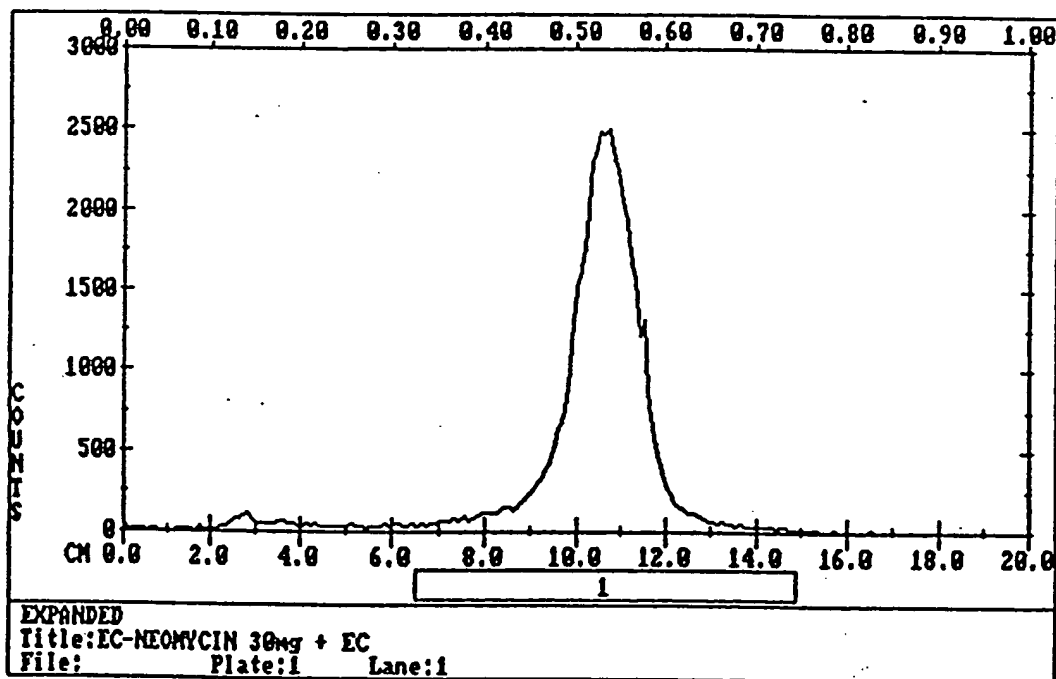


FIG. 41

Radio-TLC analysis of <sup>99m</sup>Tc-EC-neomycin.

# <sup>99m</sup>Tc-EC-NEO

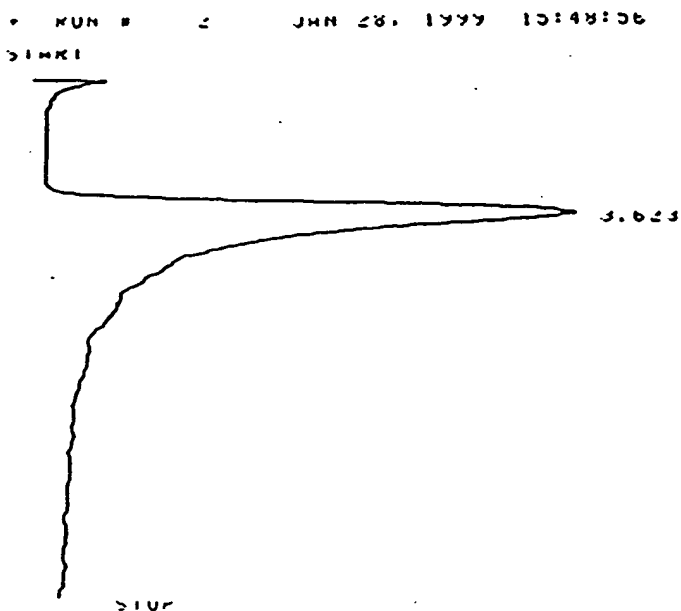
Column: Bio-Rad Carbohydrate, Aminex HPLX-87C, 250x4mm

Eluent: H<sub>2</sub>O

Flow Rate: 0.4ml/min

Detector: Radiochemical

Temp: 85.0°C



RUN 2 JAN 28, 1999 15:48:56  
 AREA%  
 RT. AREA TYPE WIDTH AREA%  
 5.023 847450/2 84 386. 100.00000  
 TOTAL AREA=847450/2  
 AUC=1.00000E+00

FIG. 42

HPLC analysis of <sup>99m</sup>Tc-EC-neomycin (radioactive detector).

<sup>99m</sup>Tc-EC-NEO

Column: Bio-Rad Carbohydrate, Aminex HPX-87C, 250x4mm

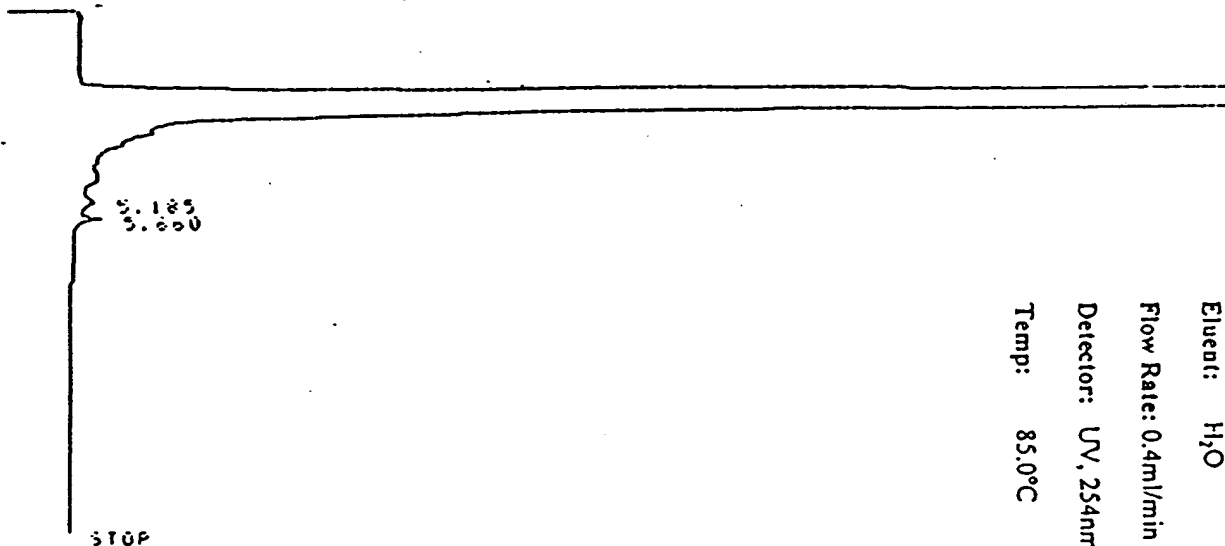
Eluent: H<sub>2</sub>O

Flow Rate: 0.4ml/min

Detector: UV, 254nm

Temp: 85.0°C

RUN # 2 JAN 28. 1999 00:54:29  
START



RUN# 2 JAN 28. 1999 00:54:29

RT	AREA	TYPE	WIDTH	AREA%
5.185	9971163	SPH	.498	99.71163
5.185	332604	BV	.265	.15126
5.680	255901	VB	.132	.13712

TOTAL AREA=2.5955E+08

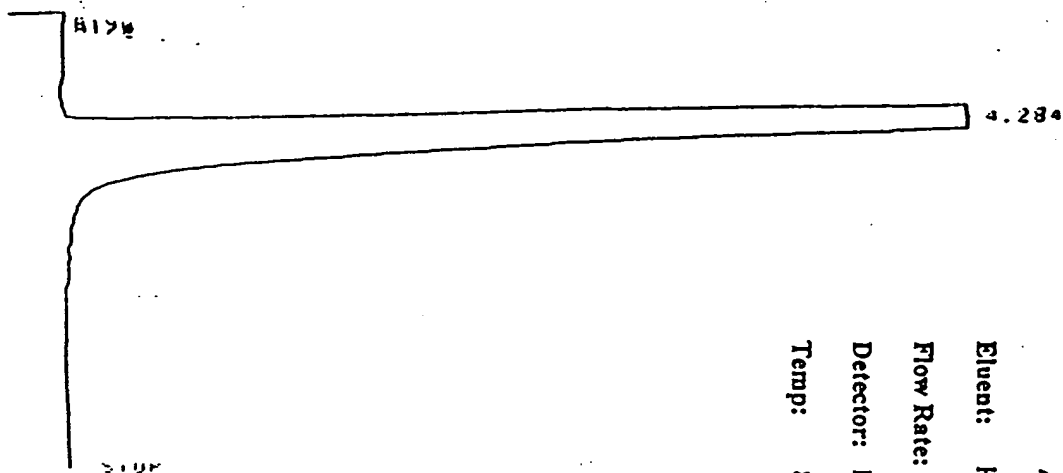
NO. FACTOR=1.0000E+00

TIME 15:10:00  
JUN 28. 1999 15:10:00

\* LMT SP 15 12  
 \* ALL 2" 1 10  
 \* TAPSH 1 10  
 \* COST 1150  
 PEAK CAPACITY: 1244

ZEXU = 0. -1.474  
 D11 20 = /  
 CHI SP = 0.5  
 OM REJ = 0  
 THRSN = /  
 PY NU = 0.04

\* KUN \* 1 JAN 28. 1999 15:31:29  
SIAXI



**Column:** Bio-Rad Carbohydrate,  
Aminex HPLX-87C, 250x4mm

**Eluent:** H<sub>2</sub>O

Flow Rate: 0.4ml/min

**Detector: Radiochemical**

Temp: 85.0°C

RUND 1 JAN 28, 1999 15131129

AREA	RI	AREA	TYPE	WIDTH	AREA
4.234	10812040	PV	1.900	100.00000	

TOTAL AREA=1.03/1E+08  
MUL FACTOR=1.0000E+00

**FIG. 44**

HPLC analysis of  $^18\text{F}$ -FDG (radioactive detector).

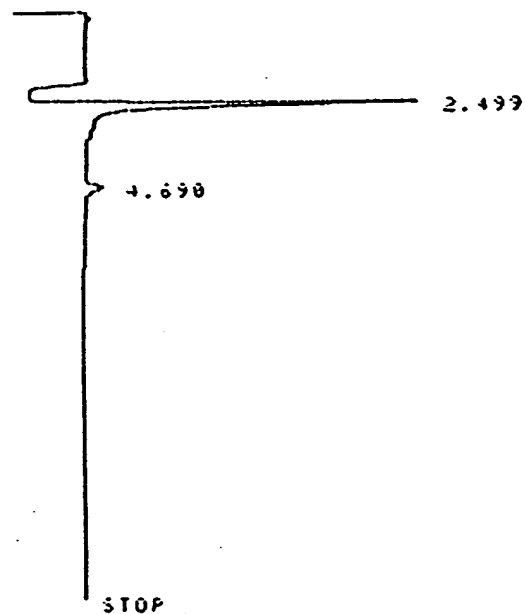
<sup>18</sup>F-FDG

• DATE 1/28/99  
JAN 28. 1999 00:16:15

• CH1 SP .5 0  
• ATT 2 0 0  
• THRESH 7 0  
• LIST: LIST  
PEAK CAPACITY: 1244

ZERO = 0. -11.179  
ATT 2 = 0  
CH1 SP = 0.5  
HR REJ = 0  
THRESH = 7  
PL WD = 0.04

• RUN # 1 JAN 28. 1999 00:37:02  
START



Column: Bio-Rad Carbohydrate,  
Aminex HPX-87C, 250x4mm  
Eluent: H<sub>2</sub>O  
Flow Rate: 0.4ml/min  
Detector: UV, 254nm  
Temp: 85.0°C

RUN# 1 JAN 28. 1999 00:37:02

FIG. 45

HPLC analysis of <sup>18</sup>F-FDG (UV 254 nm).

# % of Drug Uptake in Lung Cancer Cell Line (A549)

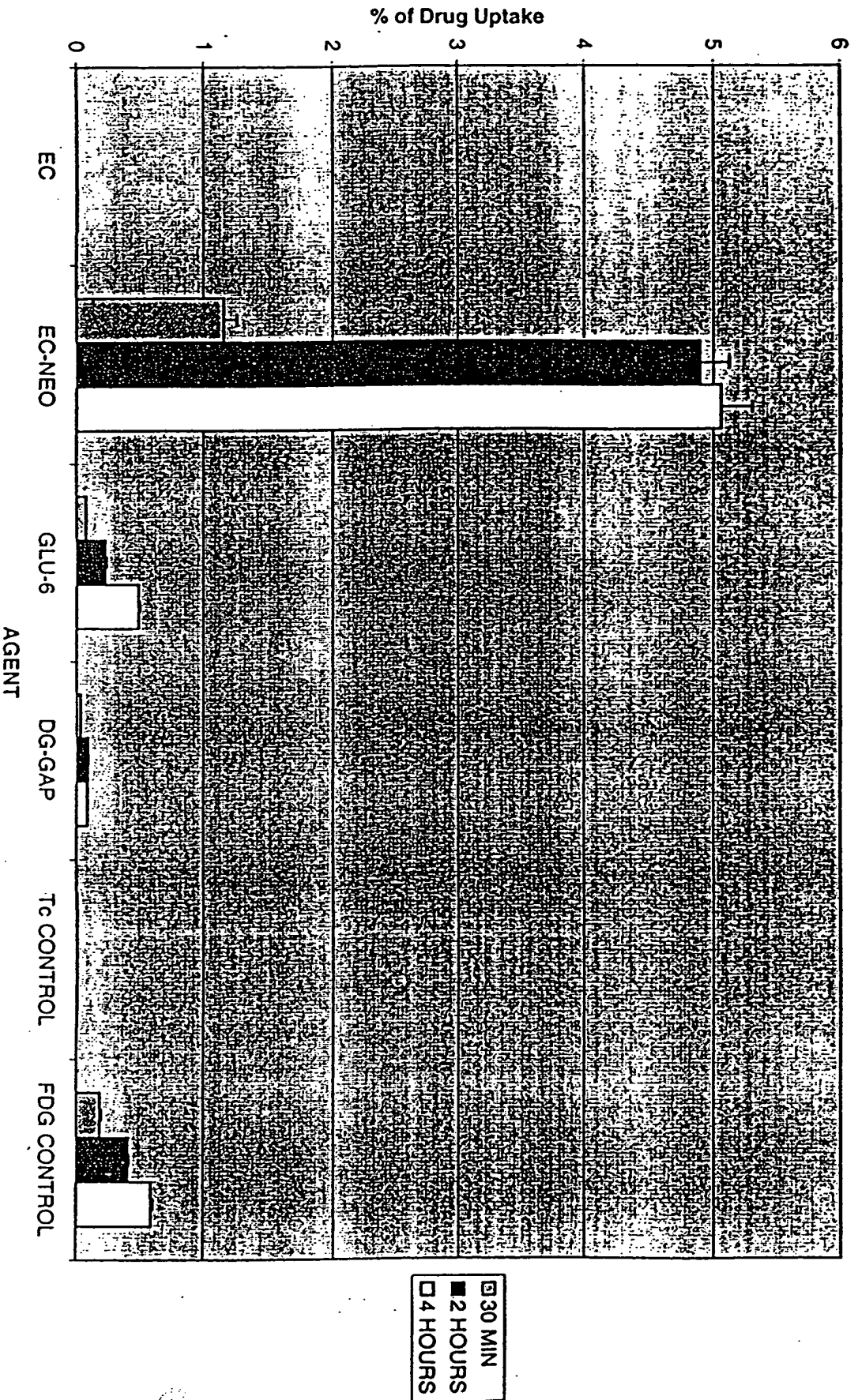
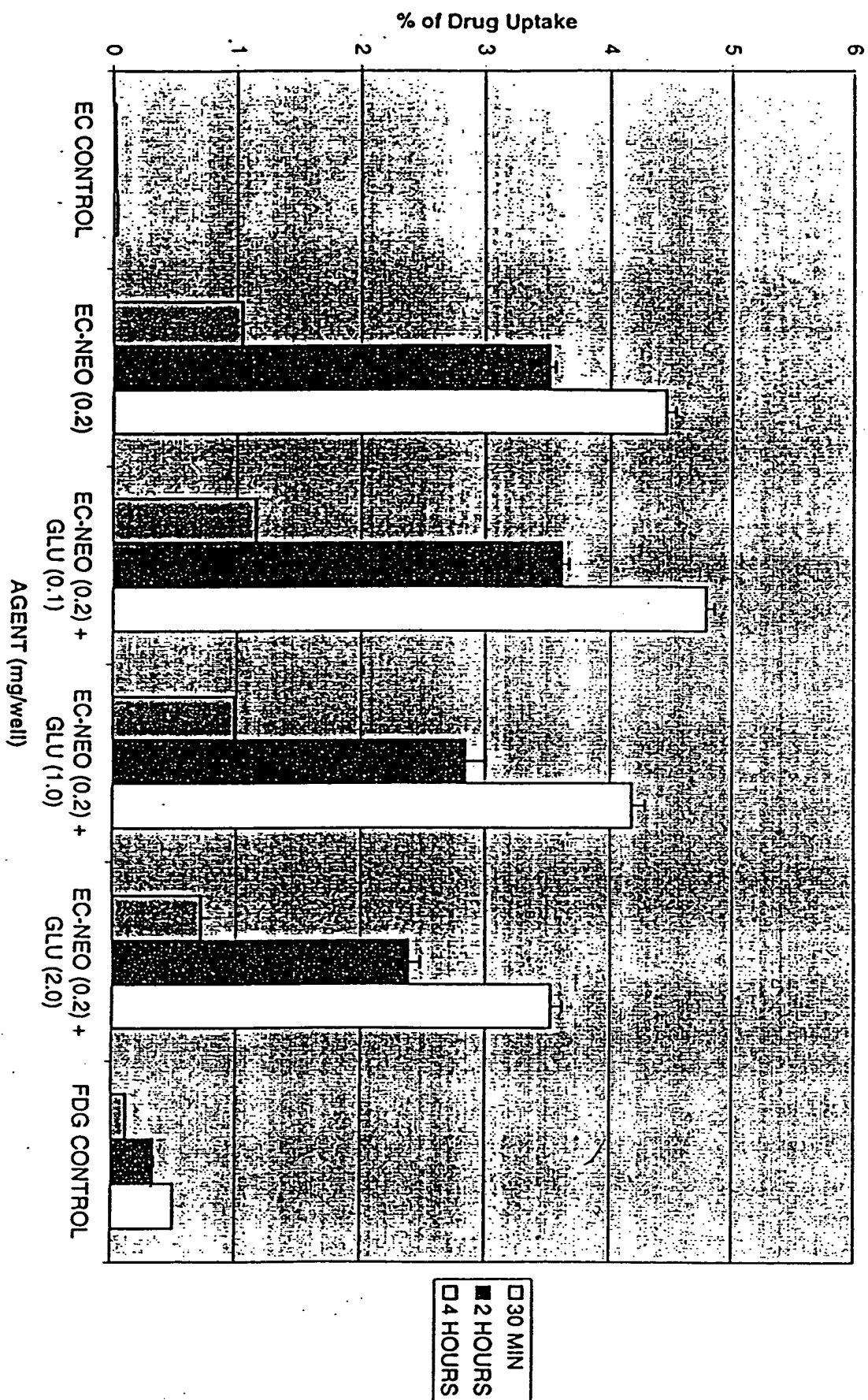


FIG. 46

In vitro cellular uptake assay of a series of  $^{99m}\text{Tc}$ -EC-drug conjugates in lung cancer cell line.  $^{99m}\text{Tc}$ -EC- neomycin showed

# % of Drug Uptake in Human Lung Cancer Cell Line (A549)



**FIG. 47**  
Effect of glucose on cellular (A549) uptake of  $^{99m}\text{Tc}$ -EC- neomycin and  $^{18}\text{F}$ -FDG.

# % of Drug Uptake in Human Lung Cancer Cell Line (H1299)

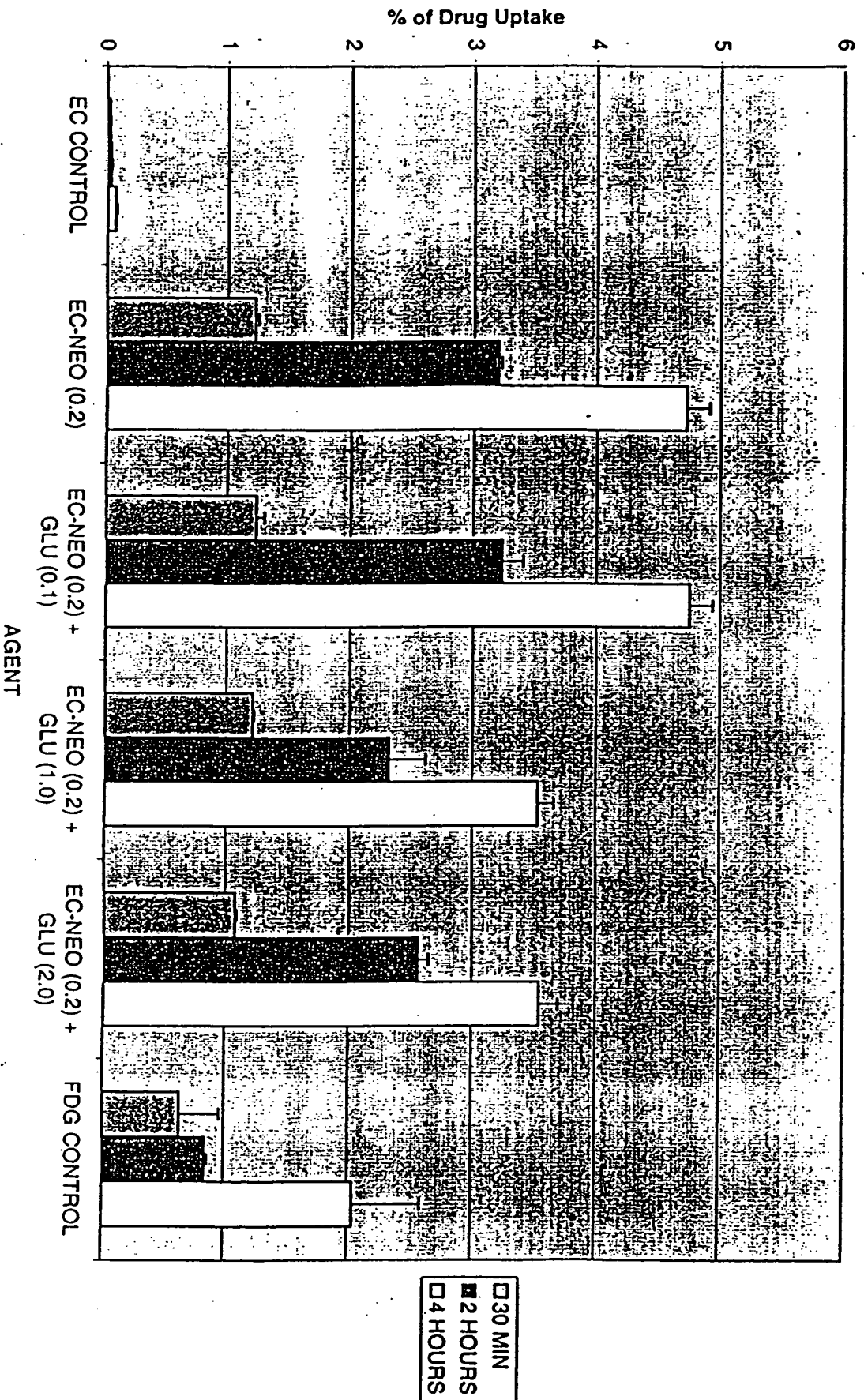


FIG. 48A

Effect of glucose on cellular (H1299) uptake of  $^{99m}\text{Tc}$ -EC-



888



**FIG. 48B**

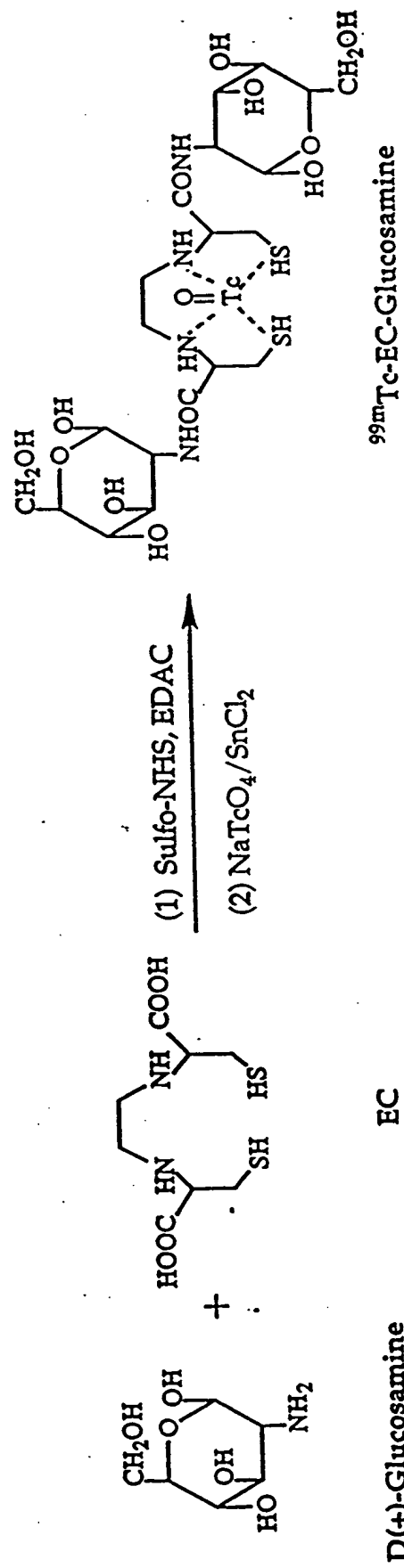
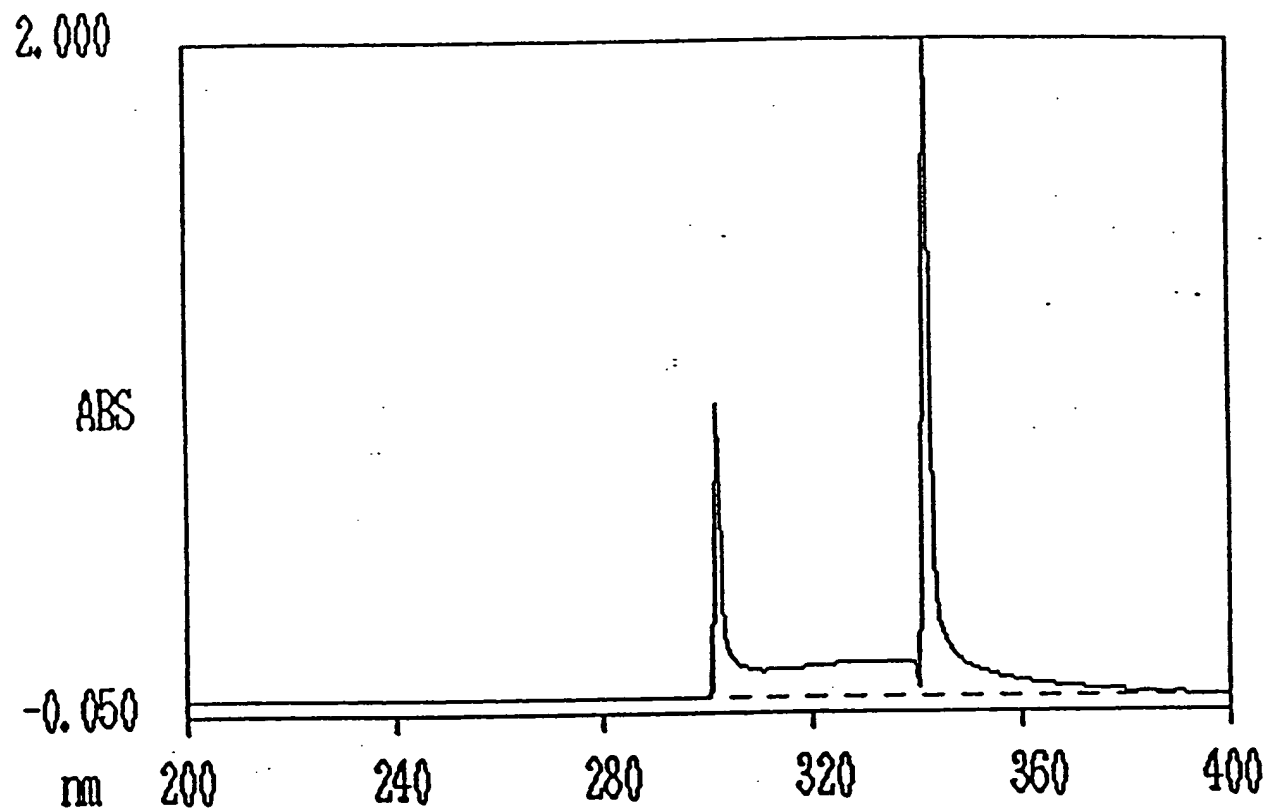


FIG. 49      Synthesis of  $^{99\text{m}}\text{Tc-EC-Glucosamine}$

# Hexokinase Assay of Glucose

WAVELENGTH SCAN/0

03/01/00 14:41



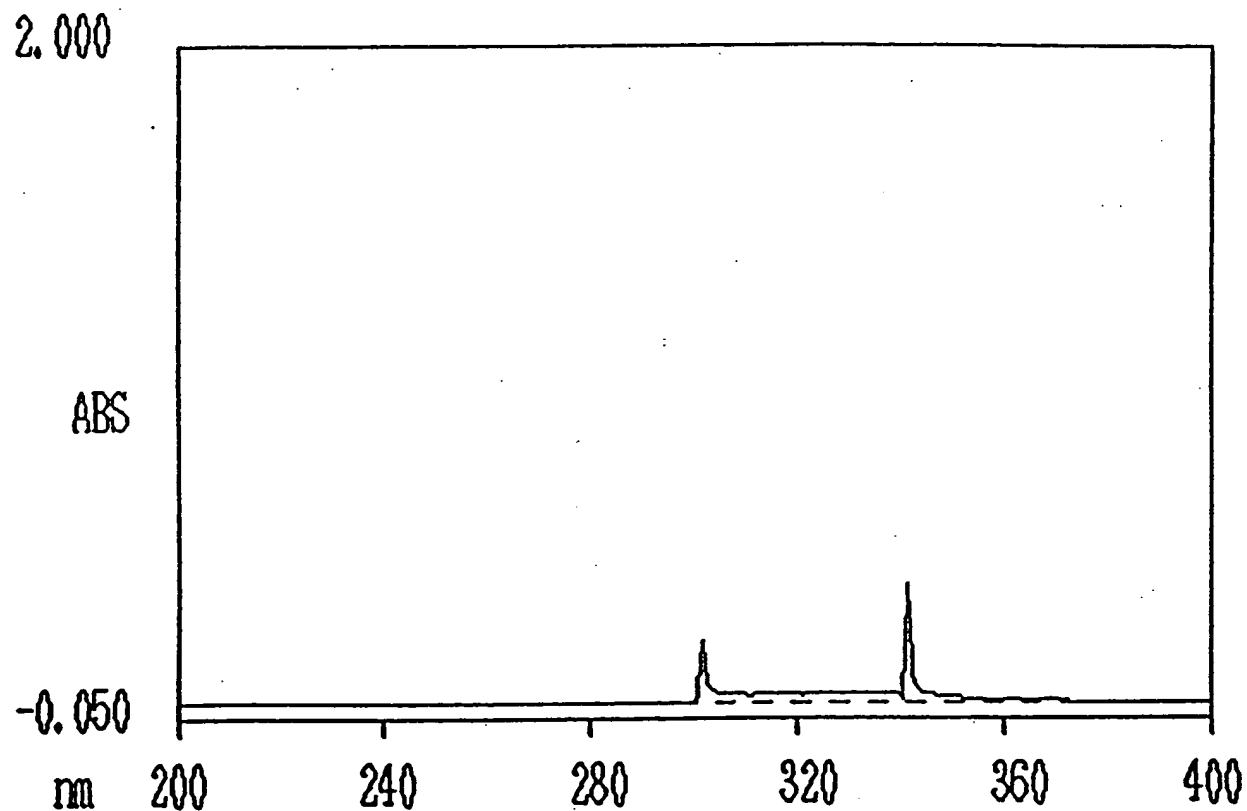
301.5 nm 0.889 ABS  
342.0 nm 2.044 ABS

FIG. 50

## Hexokinase Assay of Glucosamine

WAVELENGTH SCAN/0

03/01/00 14:50



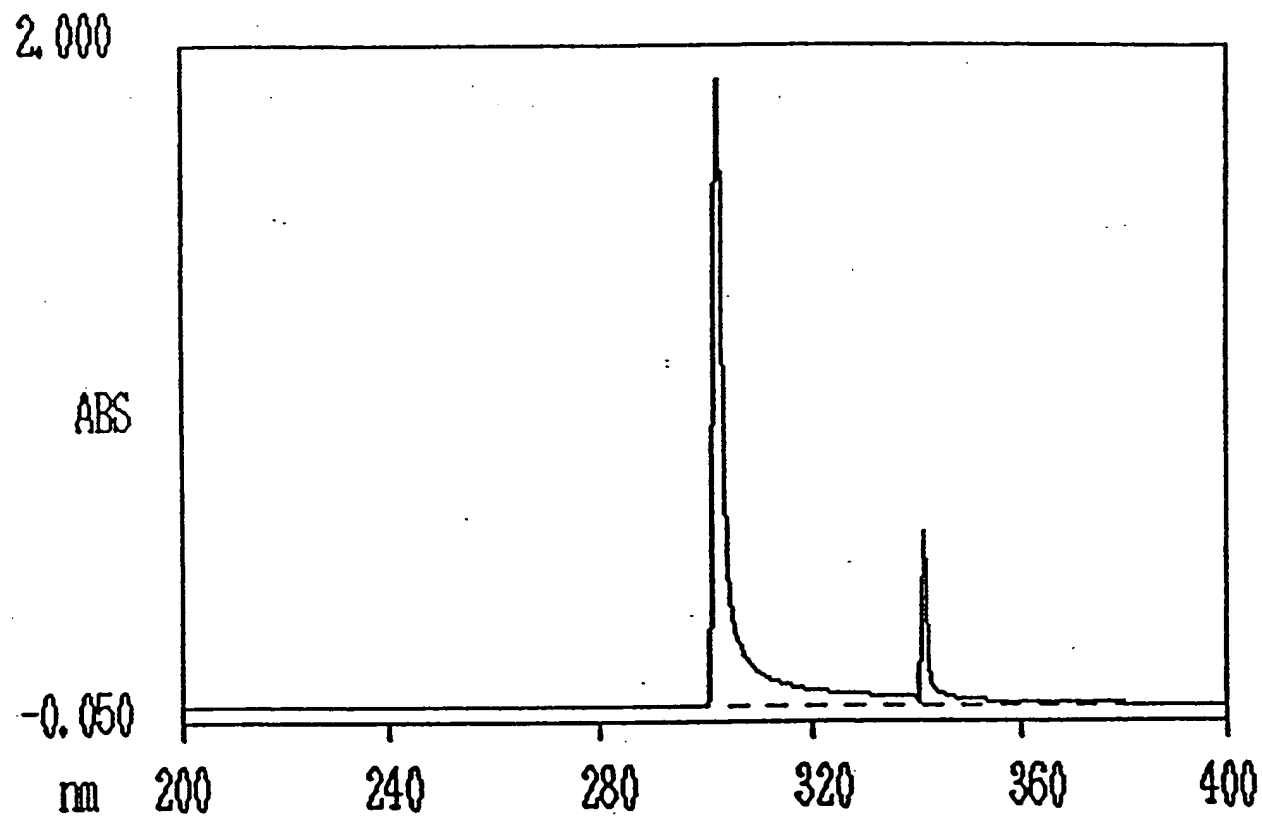
301.5 nm 0.193 ABS  
341.5 nm 0.360 ABS

FIG. 51

## Hexokinase Assay of EC-Glucosamine

WAVELENGTH SCAN/0

03/01/00 14:45



302.5 nm 1.897 ABS  
341.5 nm 0.523 ABS

FIG. 52

# Hexokinase Assay of EC-GAP-Glucosamine

WAVELENGTH SCAN/0

03/01/00 15:37

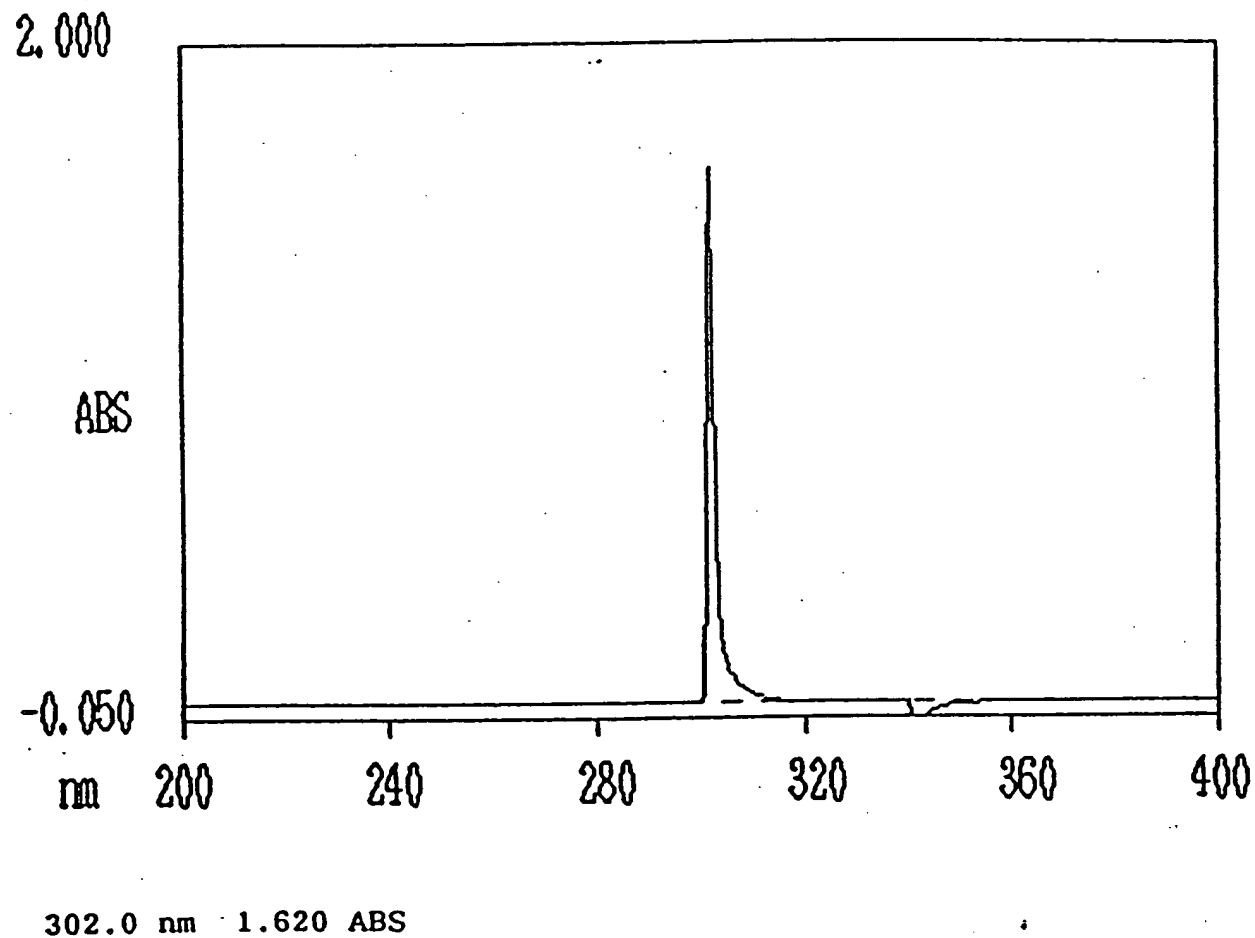
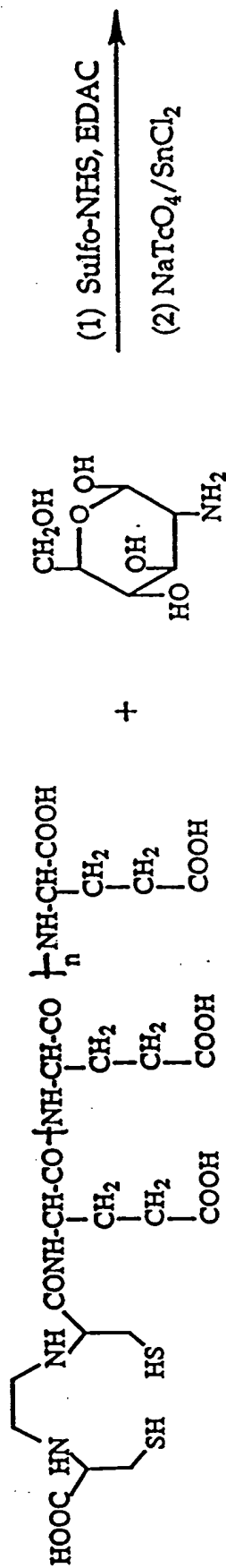
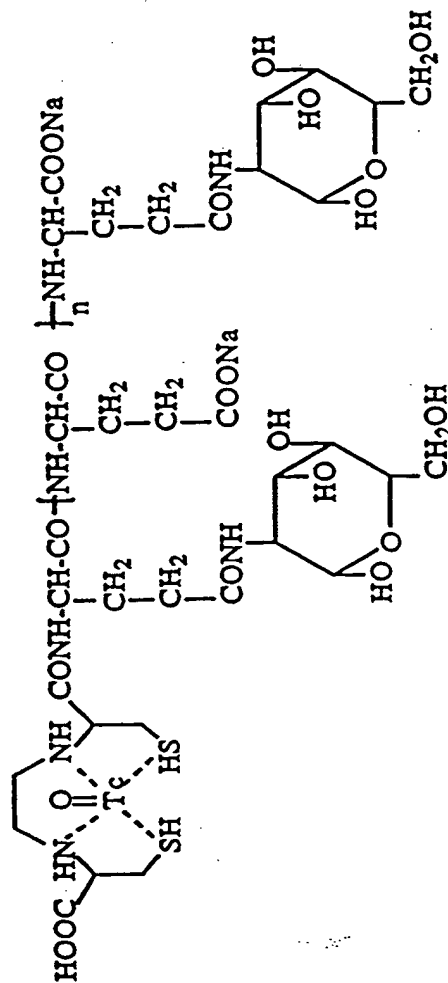


FIG. 53



D(+)-Glucosamine

EC-GAP



$^{99m}\text{Tc-EC-GAP-Glucosamine}$

FIG. 54      Synthesis of  $^{99m}\text{Tc-EC-GAP-Glucosamine}$

# In Vitro Cellular Uptake of $^{99m}\text{Tc}$ -EC in Human Lung Cancer Cell Line (A549)

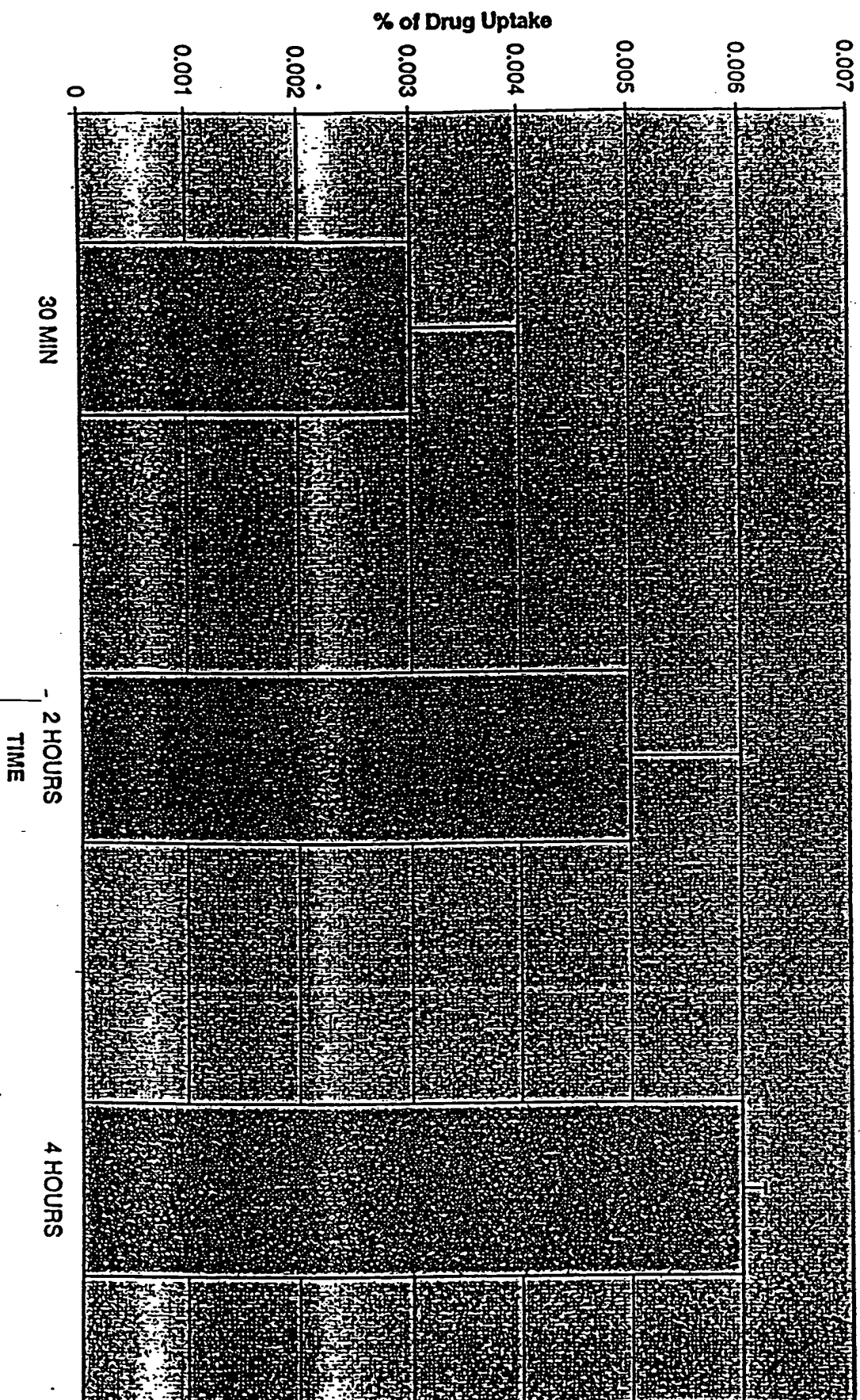


FIG. 55A



# In Vitro Cellular Uptake of $^{99m}\text{Tc}$ -EC-DG-GAP in Human Lung Cancer Cell Line (A549)

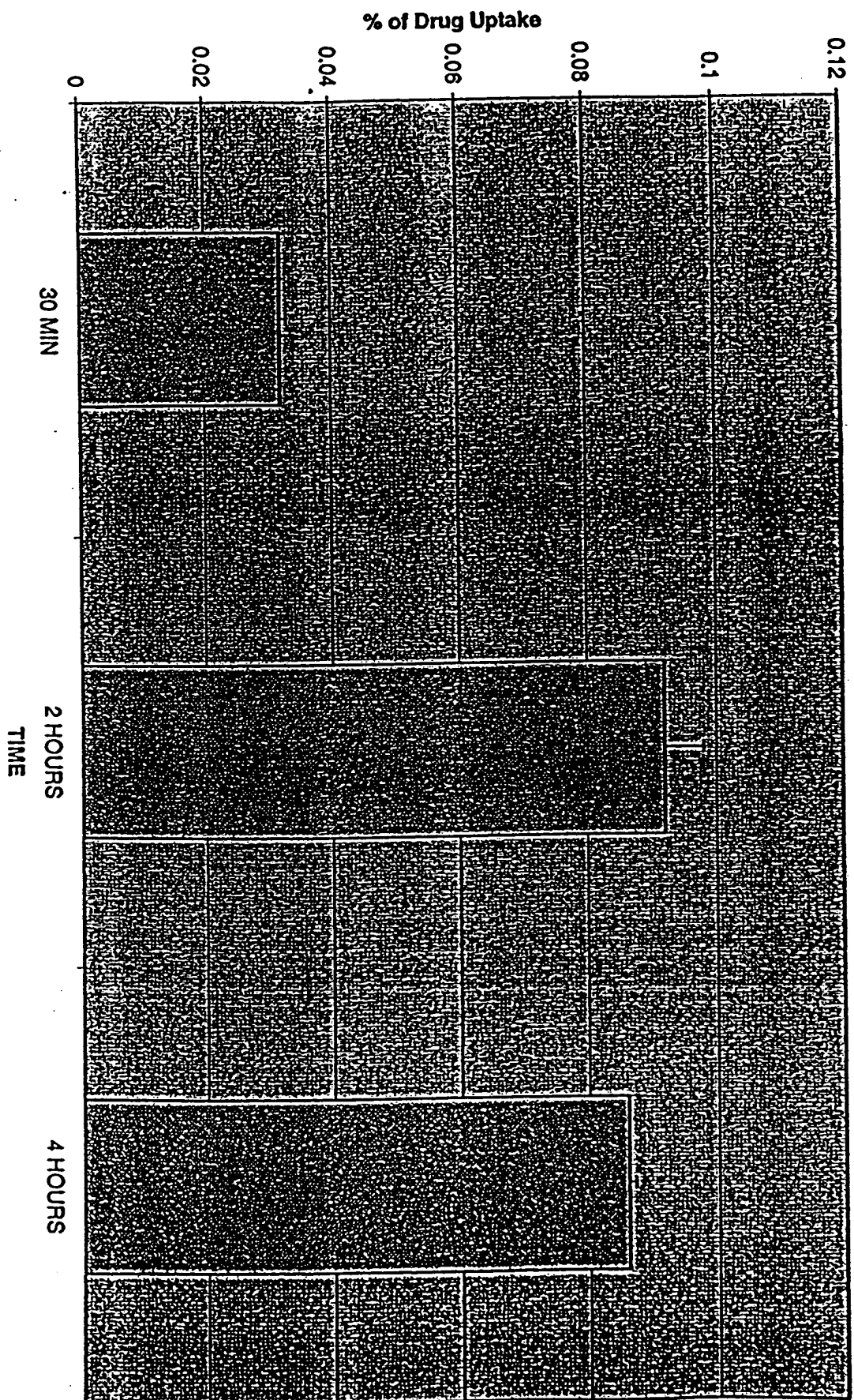


FIG. 55B

In Vitro Cellular Uptake of  $^{18}\text{F}$ FDG in Human Lung Cancer Cell Line (A549)

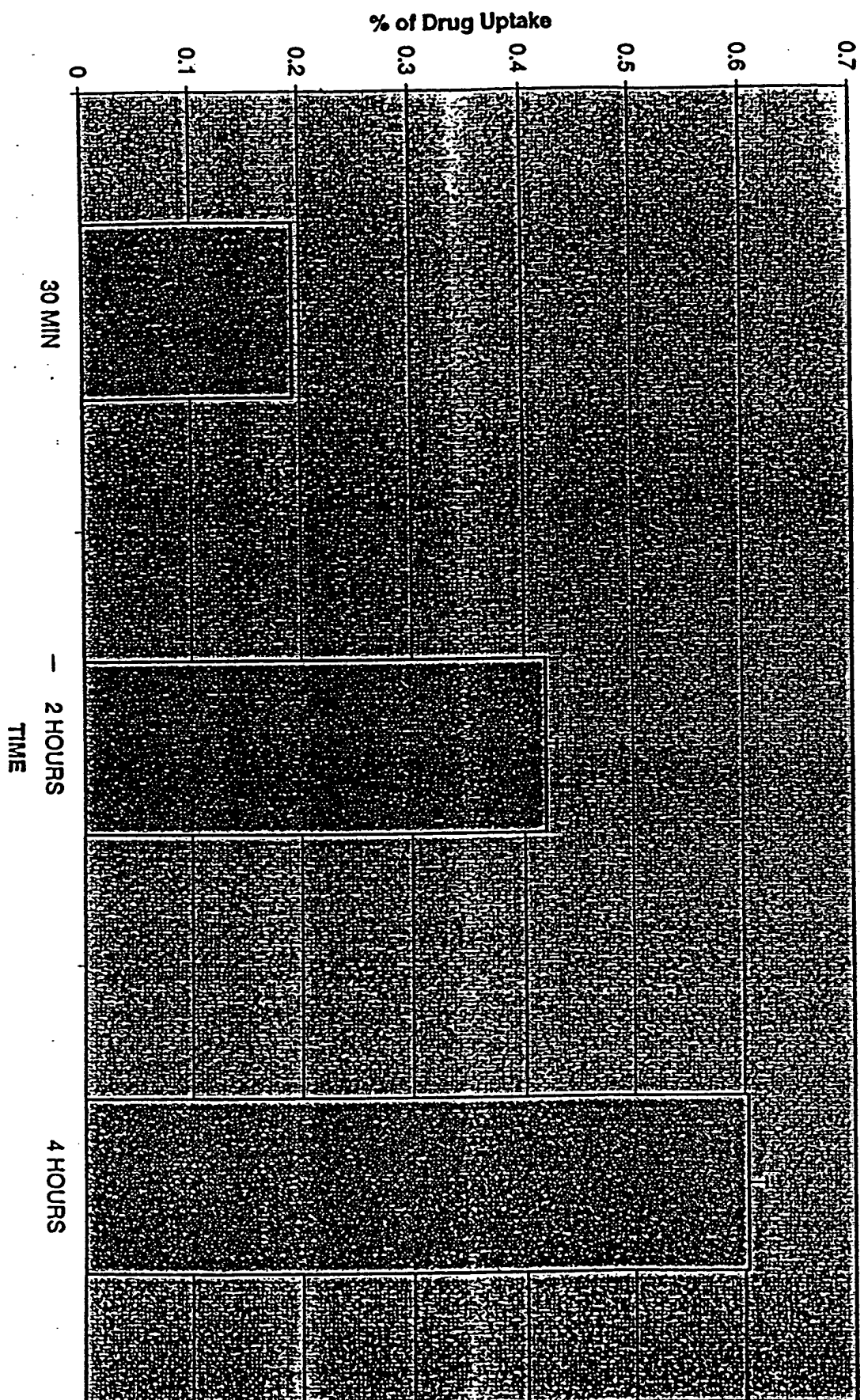


FIG. 55C

Tumor-to-tissue count density ratios of  $^{86}\text{mTc}$ -EC-GAP in breast tumor-bearing rats  
(n=3/Interval; 10  $\mu\text{Ci/rat}$ , IV)

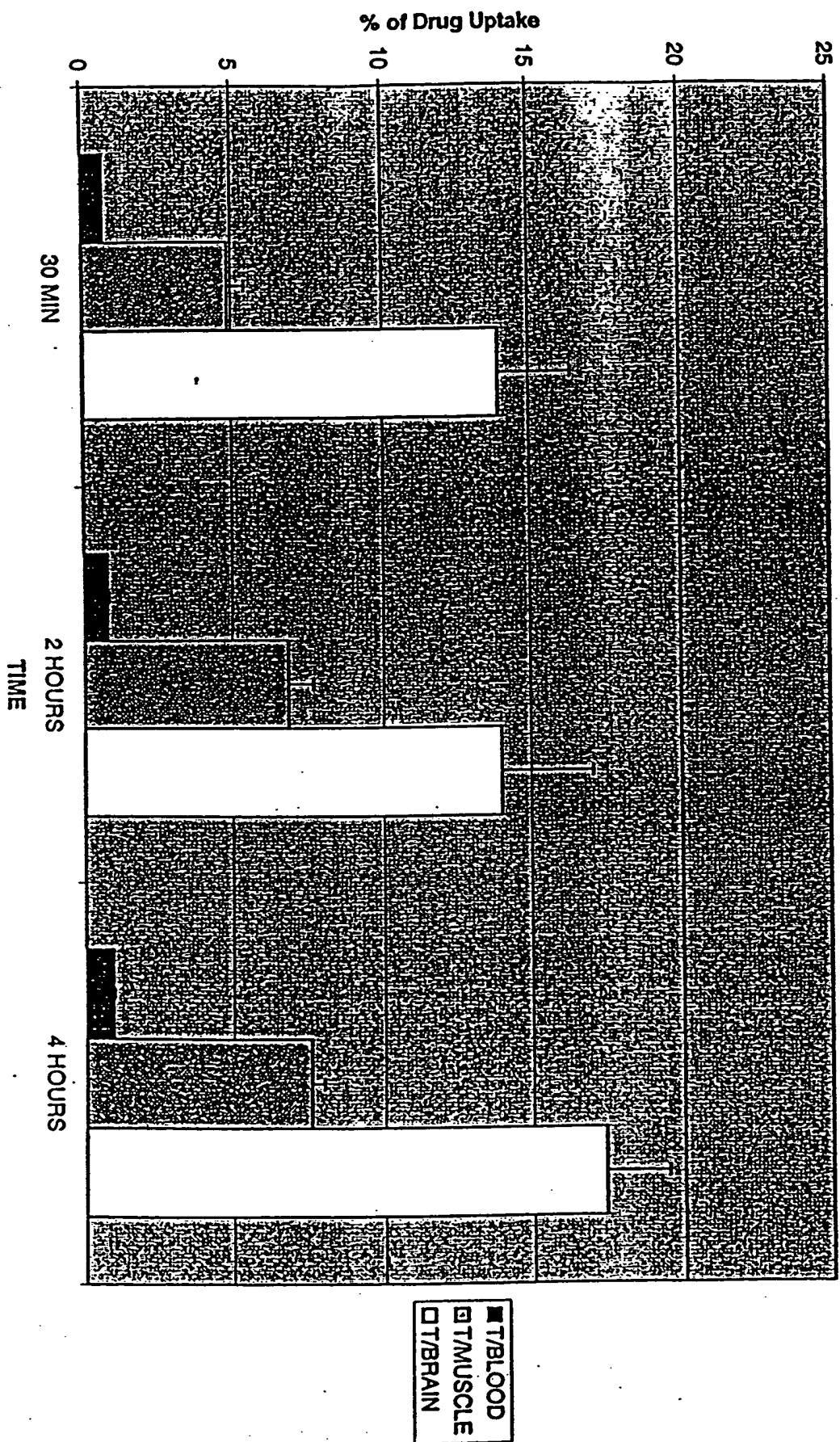
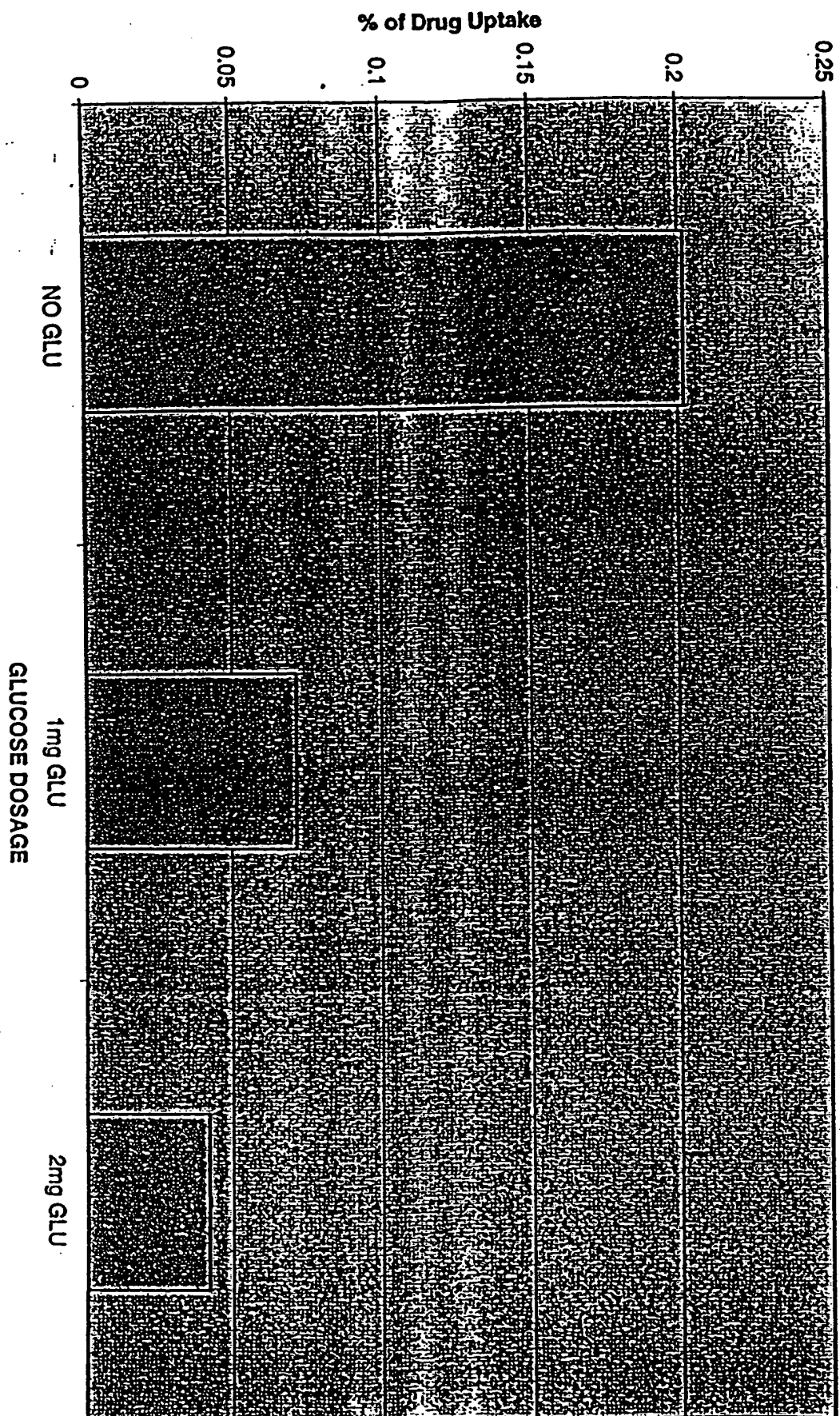


FIG. 56

**In Vitro Cellular Uptake of  $^{18}\text{F}$ FDG with Glucose Loading at 2 Hours Post-Injection in Breast Cancer Cell Line (13762)**



**FIG. 57**

# % Uptake of <sup>99m</sup>Tc-EC-Neomycin In Breast Tumor-Bearing Rats

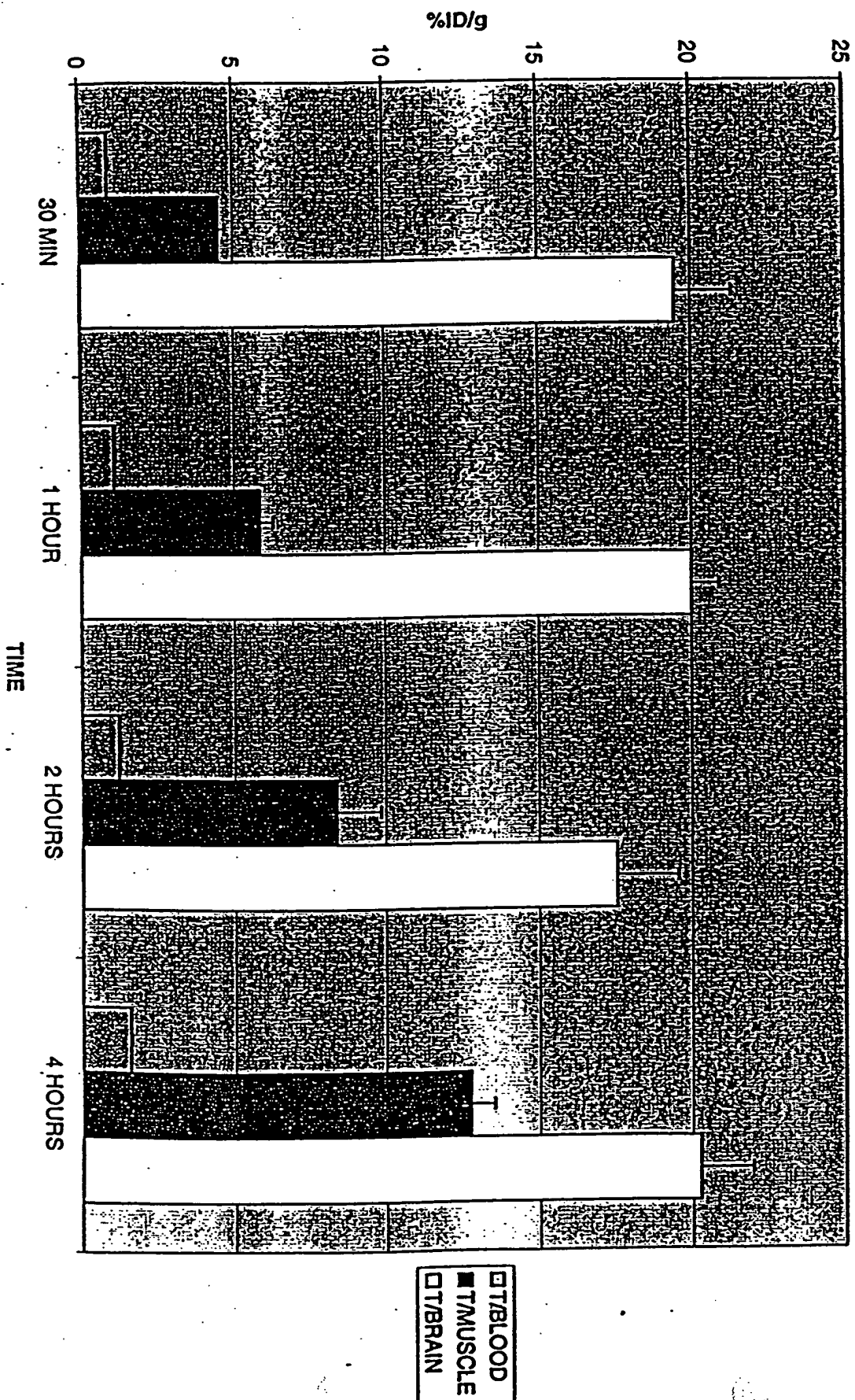


FIG. 58

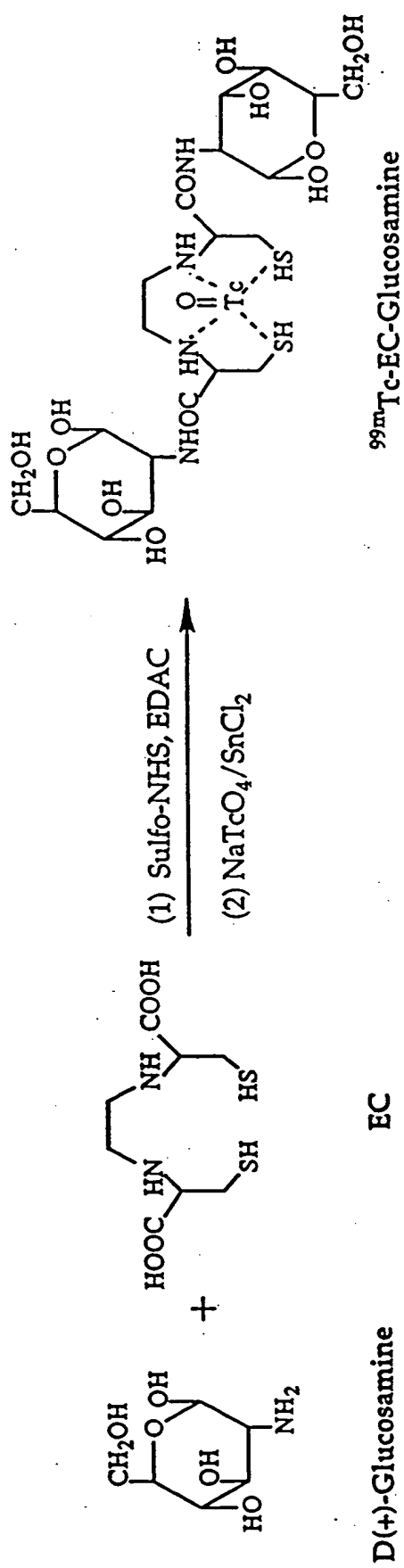
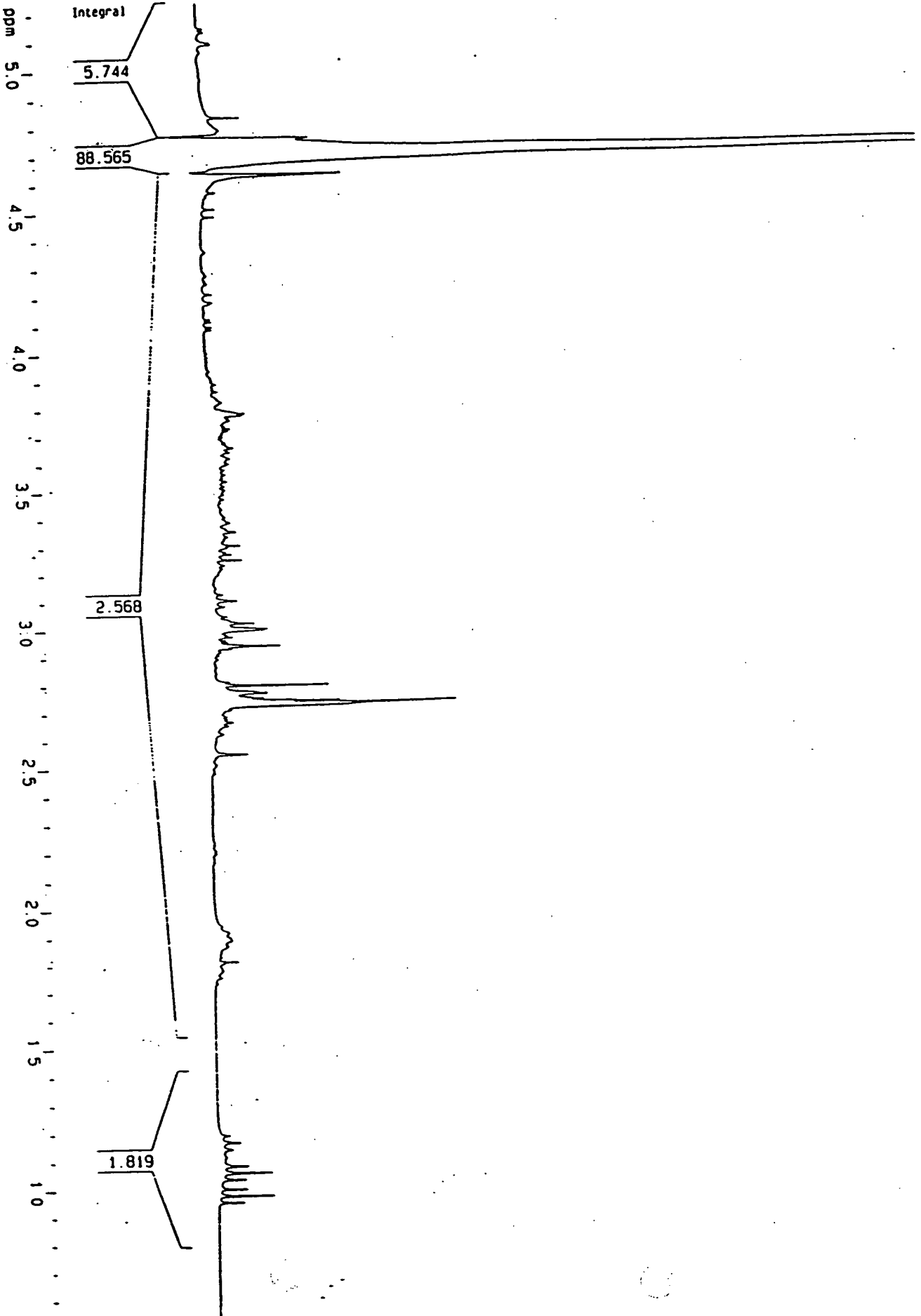


FIG. 59 Synthetic scheme of  $^{99\text{m}}\text{Tc-EC-deoxyglucose}$ .









Glucosamine

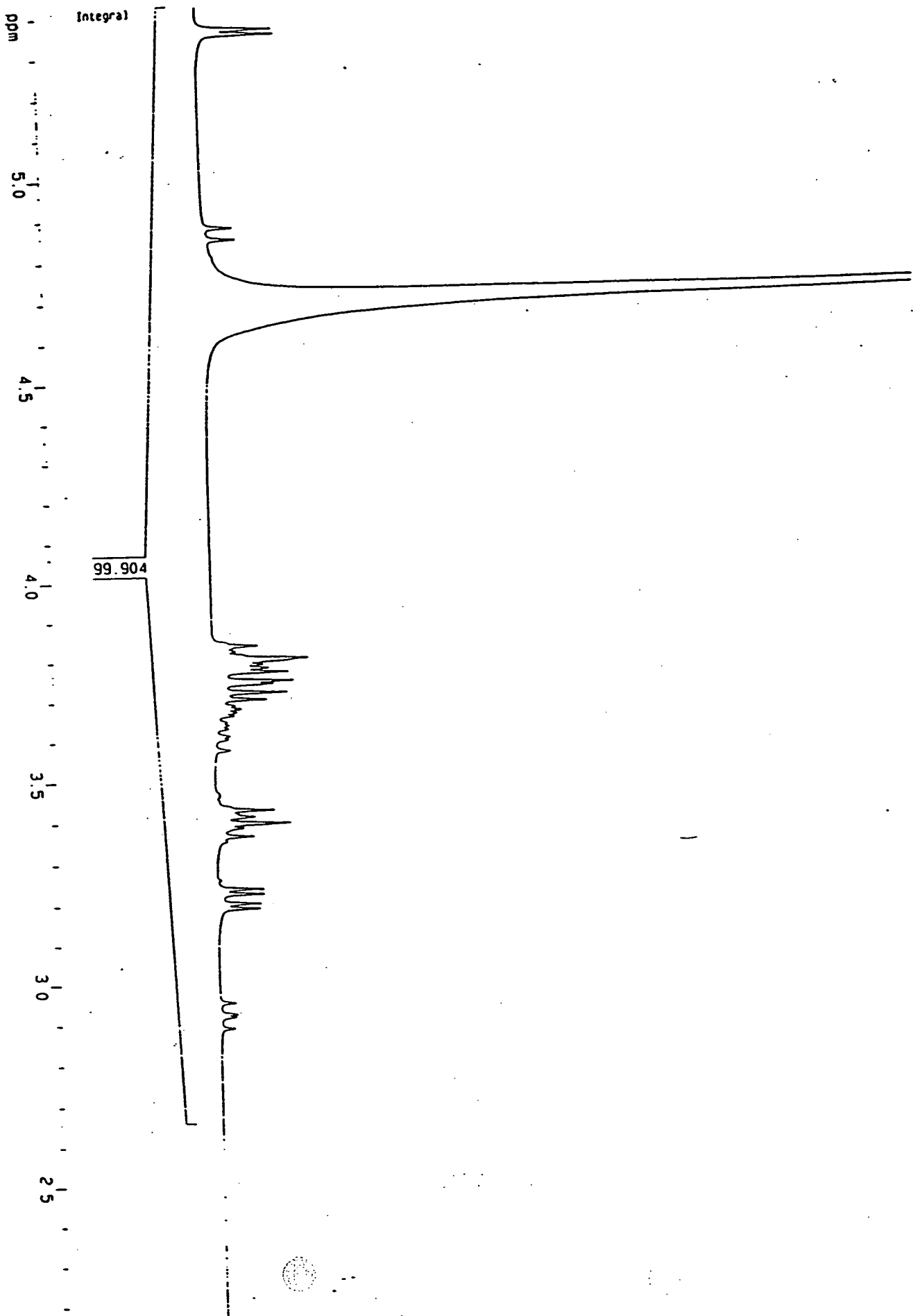
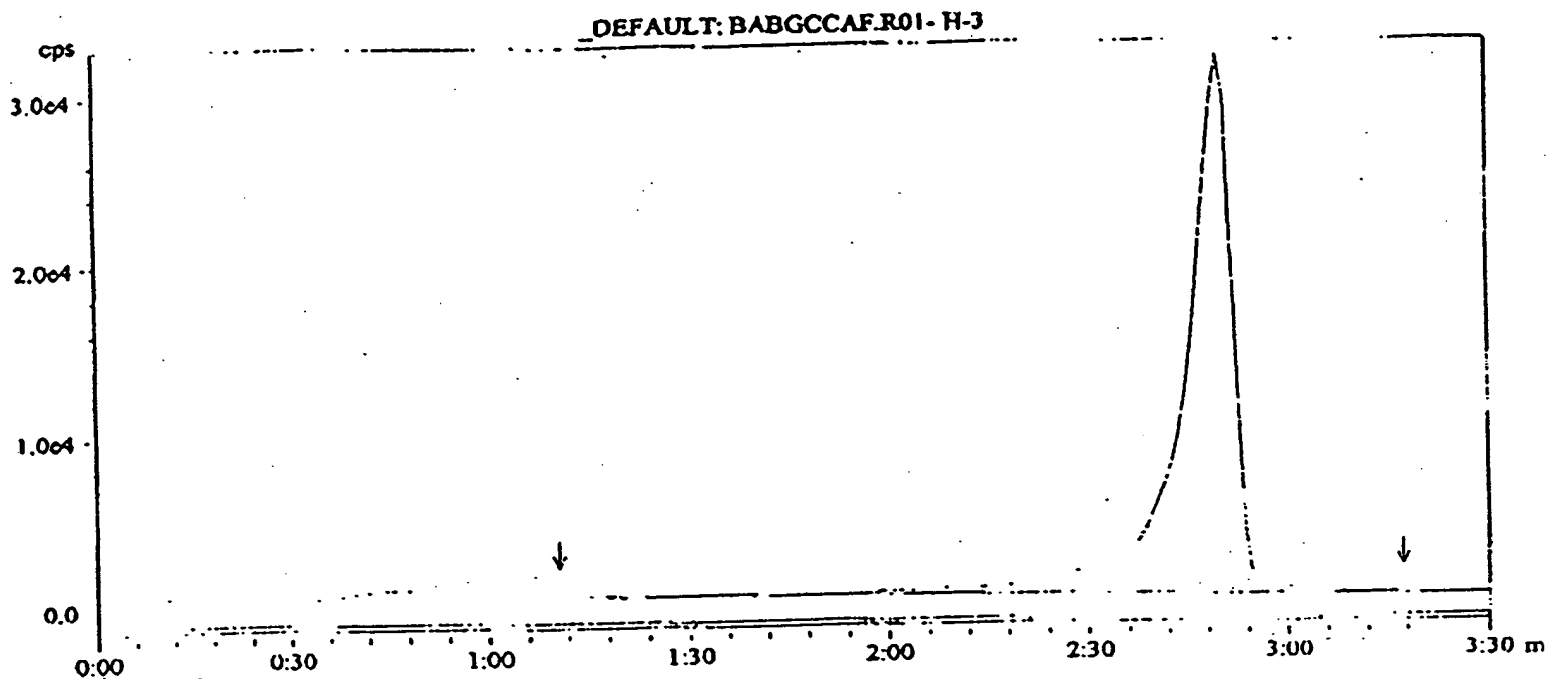


FIG. 62

$^1\text{H}$ -NMR of glucosamine.

Method: DEFAULT File: BABGCCAF.R01 Raw data User: EC-Glucosami

(99m Tc-EC-DG TLC)



Integrals: BABGCCAF.R01

Channel: H-3		Detector:					
Name	Start - End	RT	Height (cps)	Area (Counts)	%Total (%)	%ROI (%)	
Bkg 1	0: 00- 2: 19	1: 09	539. 7				
Rgn 1	2: 19- 3: 02	2: 47	31606. 2	263570. 8	97. 99	100. 00	
Bkg 2	3: 02- 3: 27	3: 14	250. 1				
1 Peak				263570. 8	97. 99	100. 00	
Total Area = 268986. 1 Counts							
Bkg Area = 89999. 9 Counts							
Unallocated = 5415. 3 Counts (2. 01%)							

Trace Parameters: BABGCCAF.R01 H-3

Trace Display Smoothing: 0.0 s  
 Trace Display Shift: 0.0 s  
 Trace Display Factor: 1.000  
 Channel Shift: 0.0 s  
 Channel Factor: 1.000

Regions were added manually.

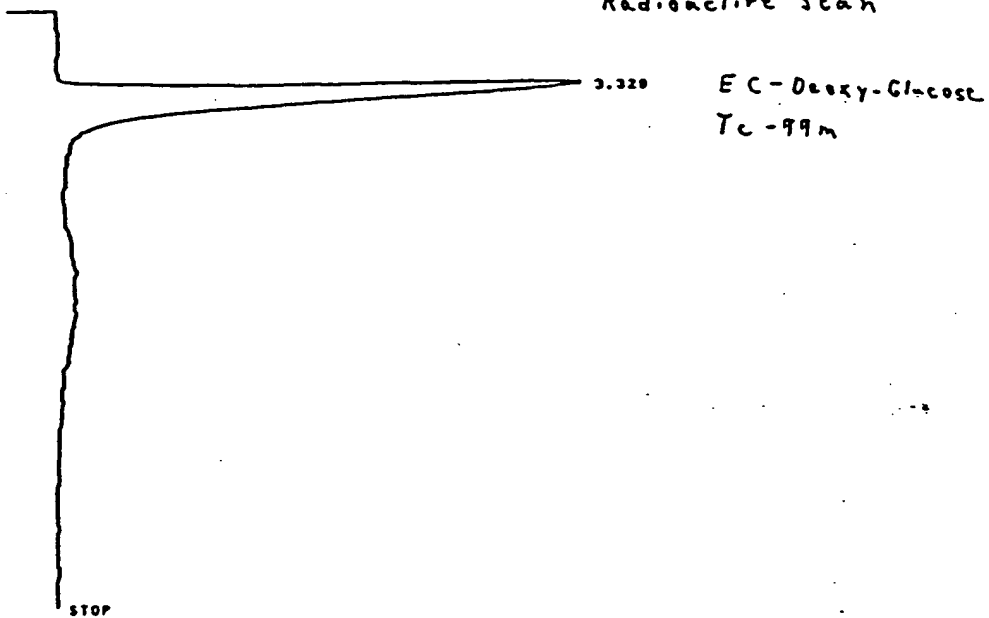
FIG. 63

Radio-TLC analysis of  $^{99m}\text{Tc}$ -EC-DG.

$^{99m}\text{Tc}$ -EC-deoxyglucose

8 Rad Aminex HPX-87C  
column  
250 x 4 mm  
.4 ml/min.  $\text{H}_2\text{O}$  at  
25°C  
Radioactive Scan

• ATT 2" 7 8  
• RUN 0 5 MAR 30. 1999 14143128  
START: not ready



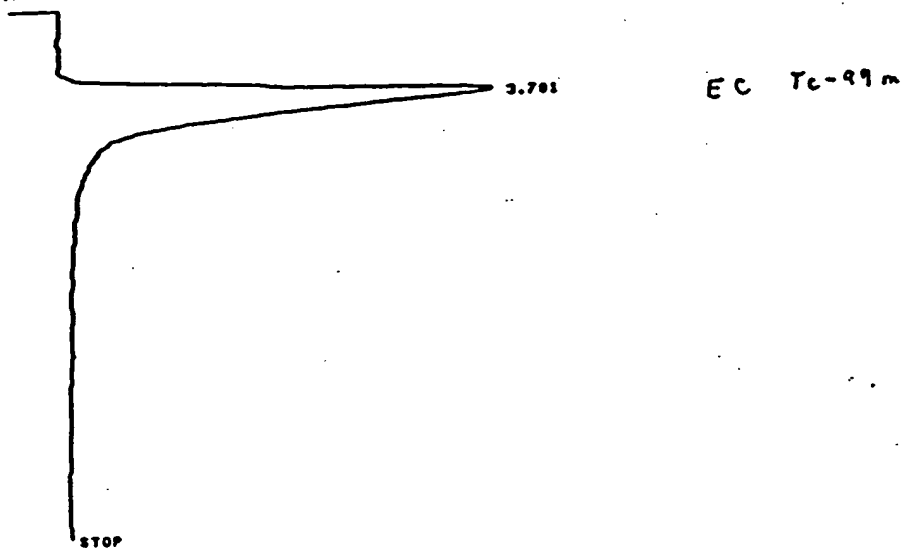
RUN 0 5 MAR 30. 1999 14143128

RT	AREA	TYPE	WIDTH	AREA*
3.328	33350000	SV	.013	100.00000

TOTAL AREA=3.335E+07  
MUL FACTOR=1.0000E+00

Radioactive Scan

• RUN 0 6 MAR 30. 1999 15109139  
START



RUN 0 6 MAR 30. 1999 15109139

RT	AREA	TYPE	WIDTH	AREA*
3.701	16671104	SV	.310	100.00000

TOTAL AREA=1.6671E+07

$^{99m}\text{Tc}$ -EC

FIG. 64

HPLC analysis of  $^{99m}\text{Tc}$ -EC-deoxyglucose and  $^{99m}\text{Tc}$ -EC-  
(radioactive detector).

• ATT 2^ BREAK

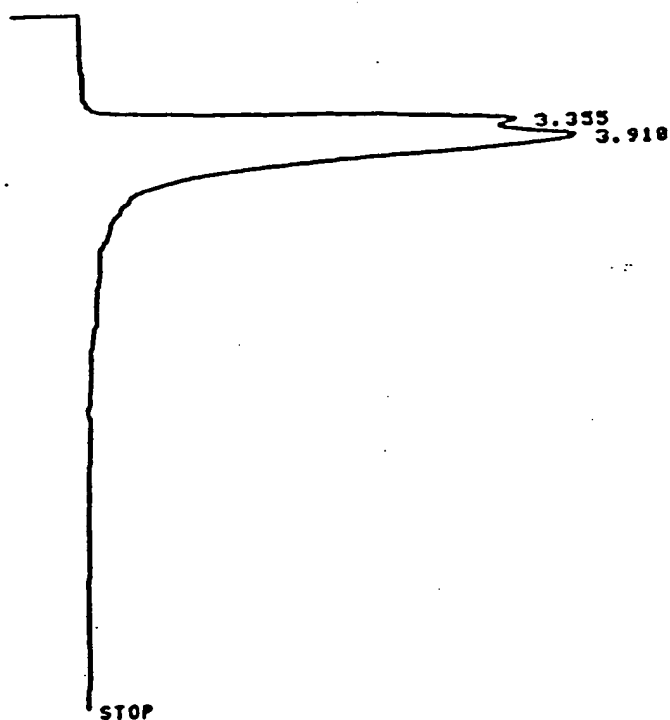
• BREAK

• LIST: ATT 2^ = 7

• ATT 2^ 8 0

• RUN 0 7 MAR 30, 1999 15132137

START



Radioactive Scan

Mixed Tc-99m  
EC-Deoxy-Glucose  
EC

$^{99m}\text{Tc}$ -EC-deoxyglucose +  $^{99m}\text{Tc}$ -EC  
(mixed)

RUN# 7 MAR 30, 1999 15132137

AREA#	RT	AREA	TYPE	WIDTH	AREA#
	3.355	22173760	BV	.448	58.46186
	3.918	21767872	VV	.387	49.53814

TOTAL AREA=4.3942E+07  
MUL FACTOR=1.0000E+00

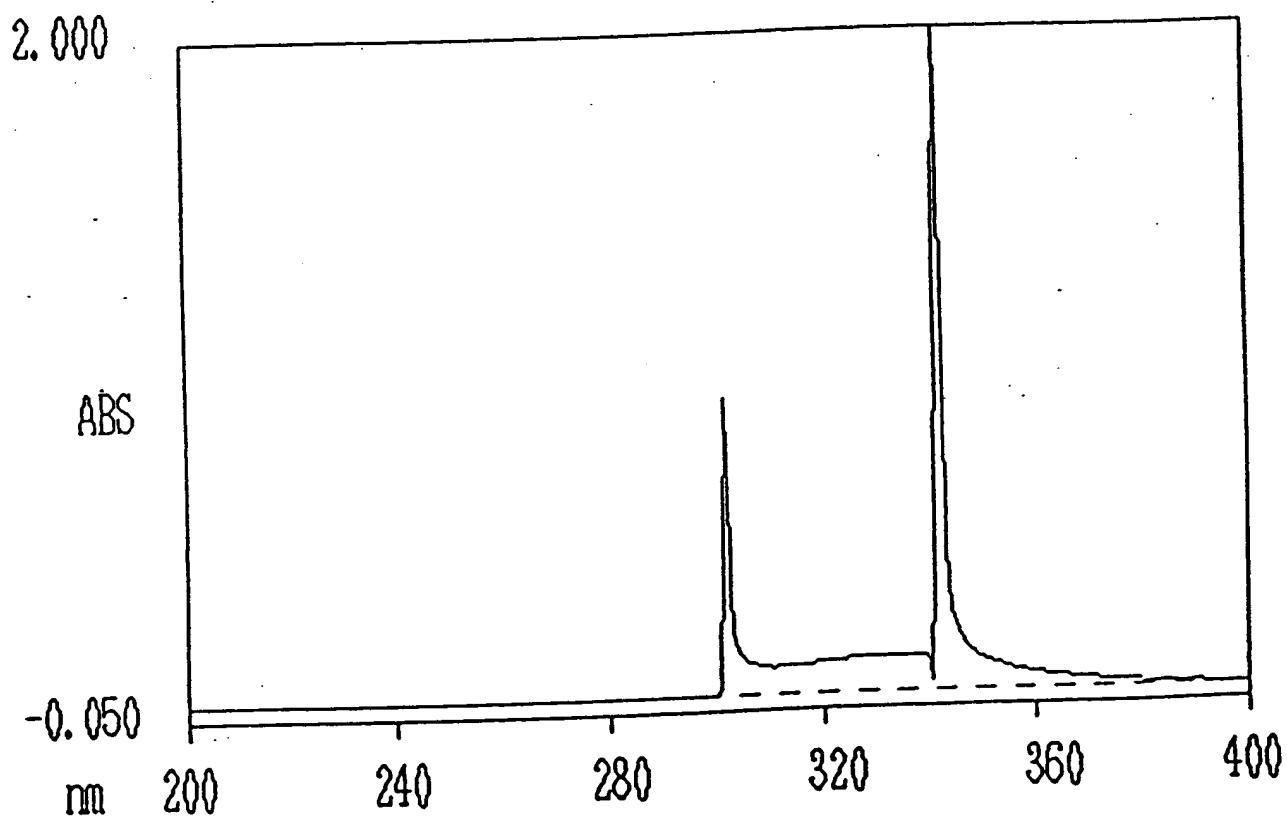
FIG. 65

HPLC analysis of  $^{99m}\text{Tc}$ -EC-deoxyglucose and  $^{99m}\text{Tc}$ -EC  
(radioactive detector, mixed).

# Hexokinase Assay of Glucose

WAVELENGTH SCAN/0

03/01/00 14:41



301.5 nm 0.889 ABS  
342.0 nm 2.044 ABS

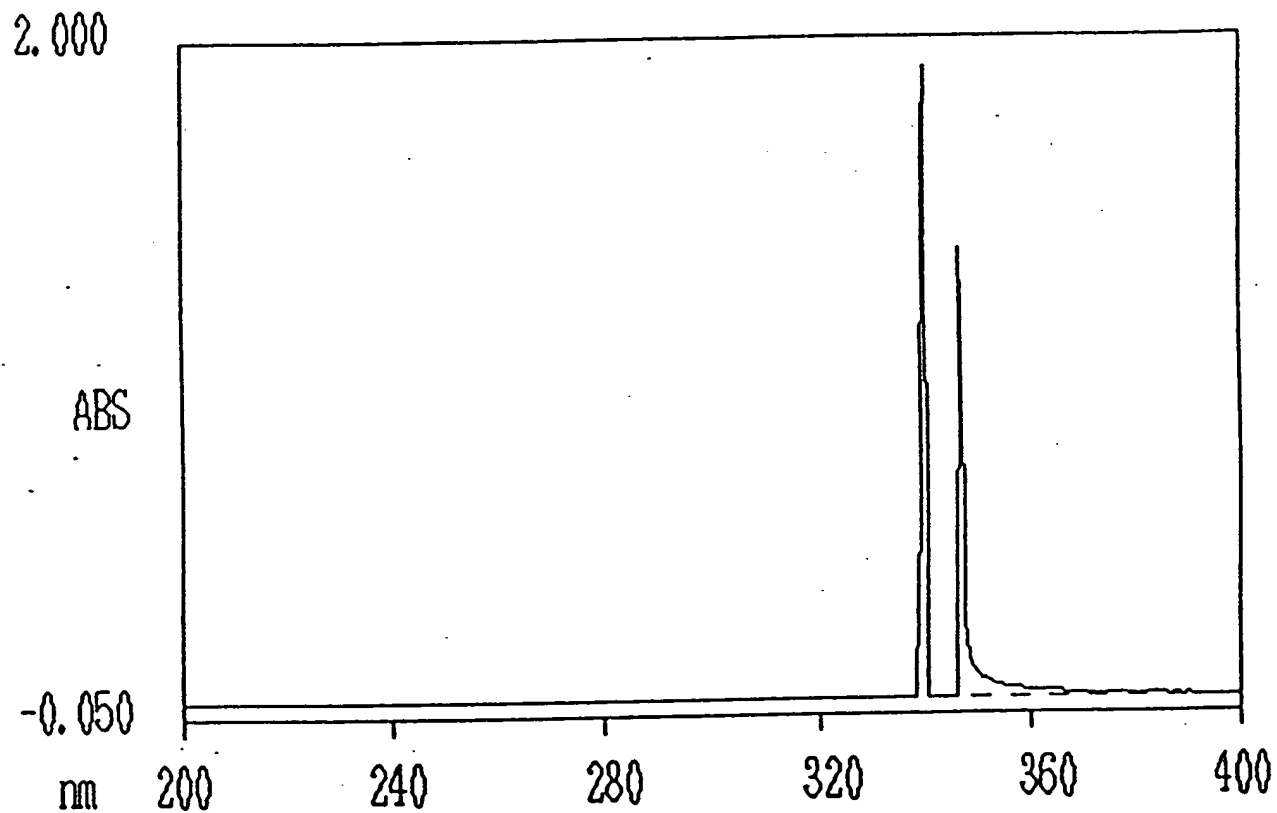
FIG. 66

Hexokinase assay of glucose.

# Hexokinase Assay of FDG

WAVELENGTH SCAN/0

03/09/00 14:34



340.0 nm 1.906 ABS  
346.5 nm 1.351 ABS

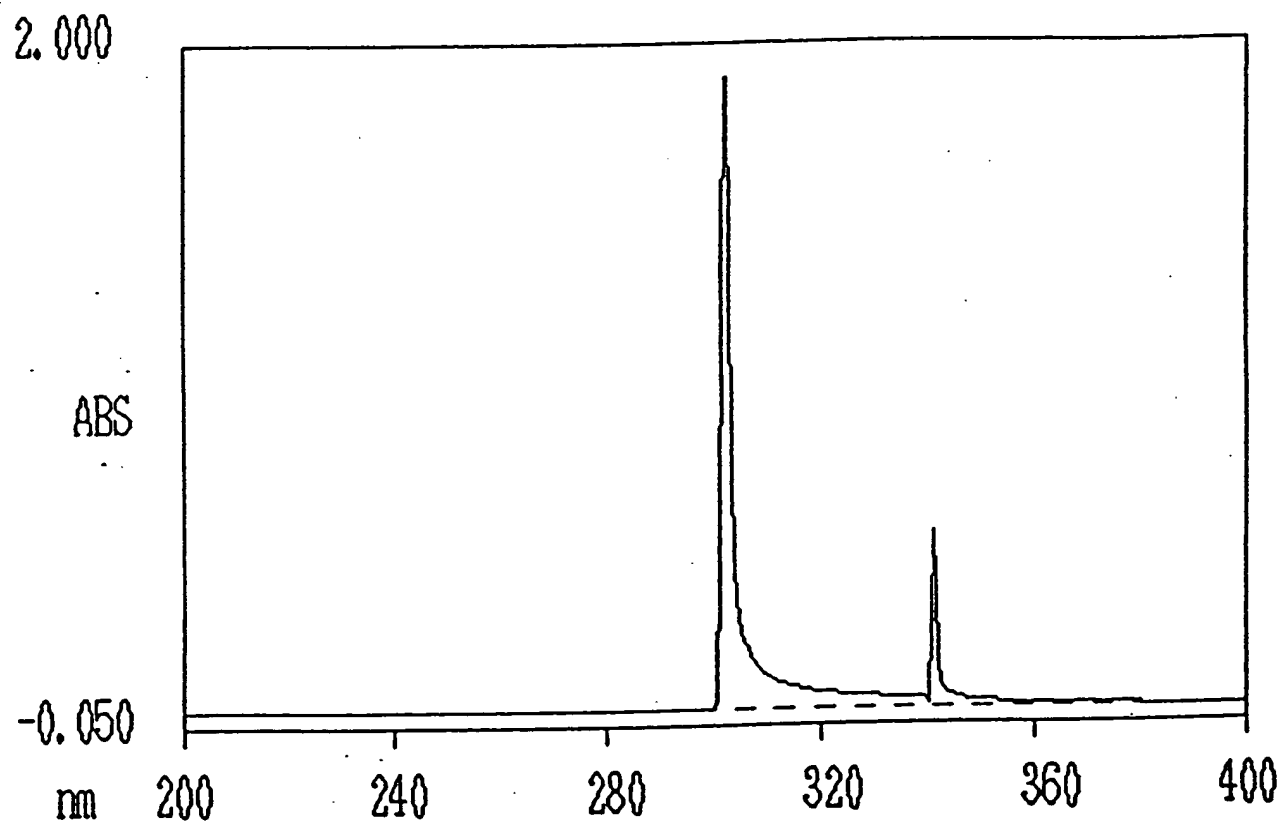
FIG. 67

Hexokinase assay of FDG.

# Hexokinase Assay of EC-Glucosamine (EC-DG)

WAVELENGTH SCAN/0

03/01/00 14:45

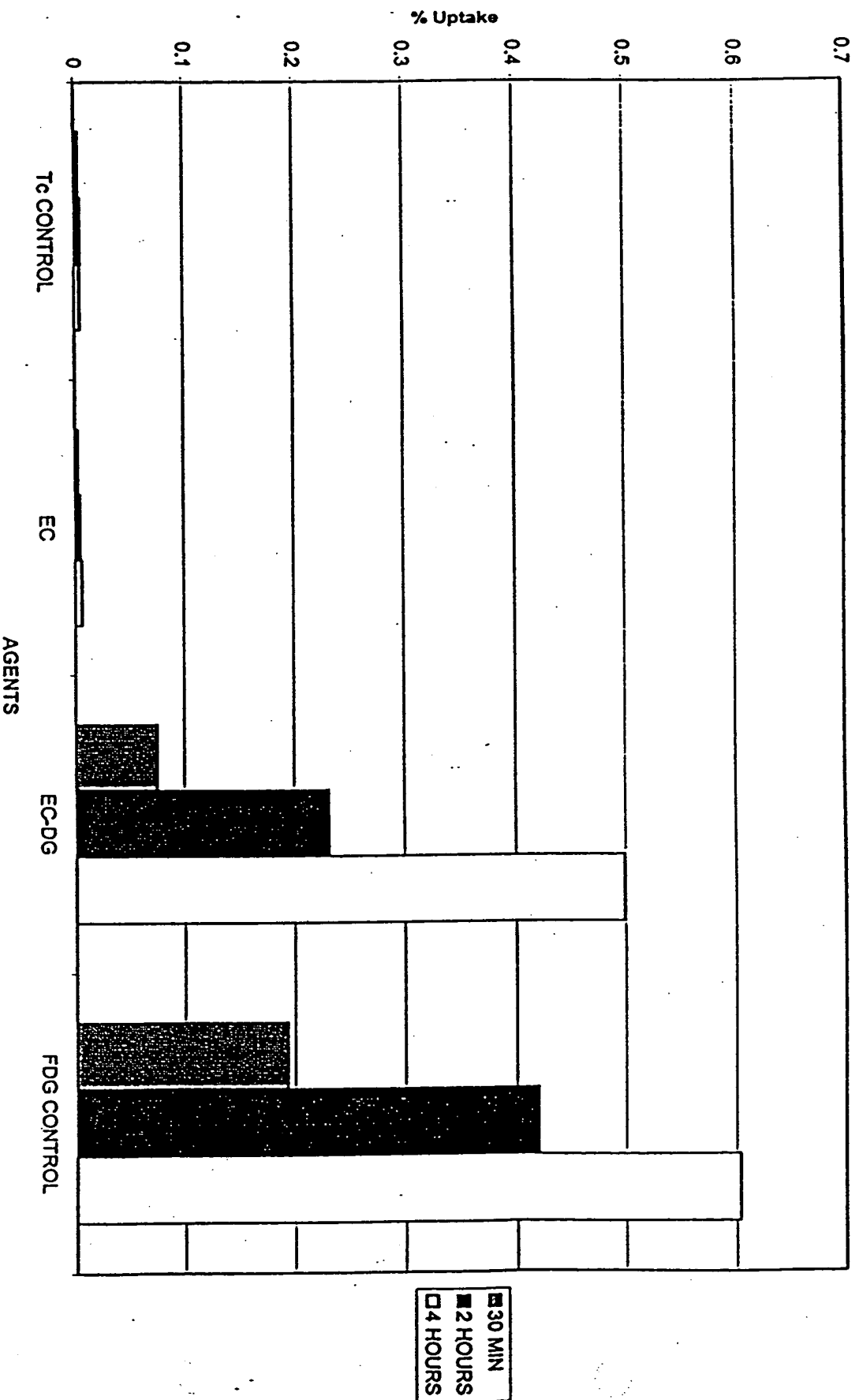


302.5 nm 1.897 ABS  
341.5 nm 0.523 ABS

FIG. 68

Hexokinase assay of EC-DG.

# % of Drug Uptake in Lung Cancer Cell Line (A549)

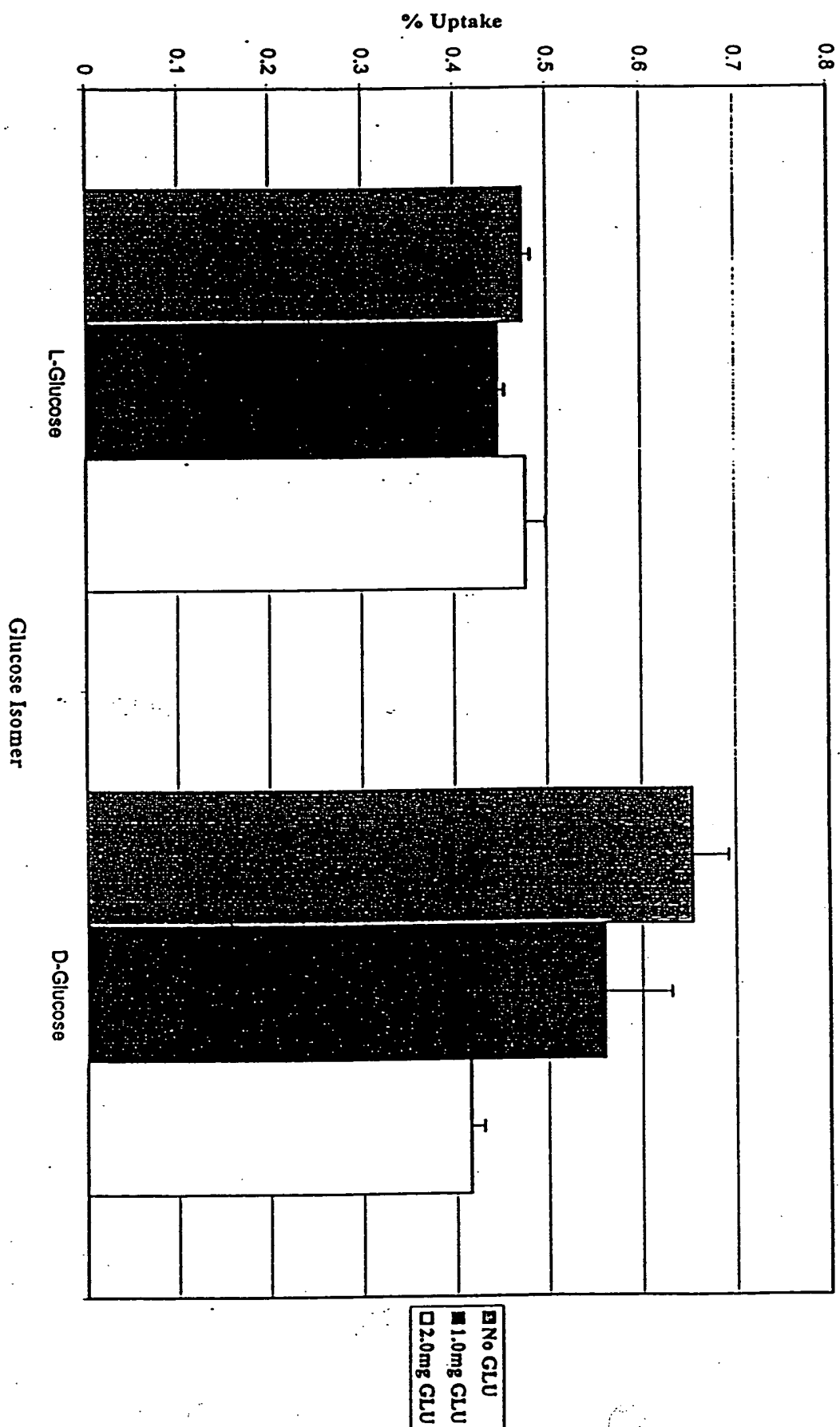


**FIG. 69**

In vitro cellular uptake assay of  $^{99m}\text{Tc}$ -EC-deoxyglucose,  $^{99m}\text{Tc}$ -EC and  $^{18}\text{F}$ -FDG in lung cancer cell line (A549).  $^{99m}\text{Tc}$ -EC-DG showed similar uptake compared to  $^{18}\text{F}$ -FDG.

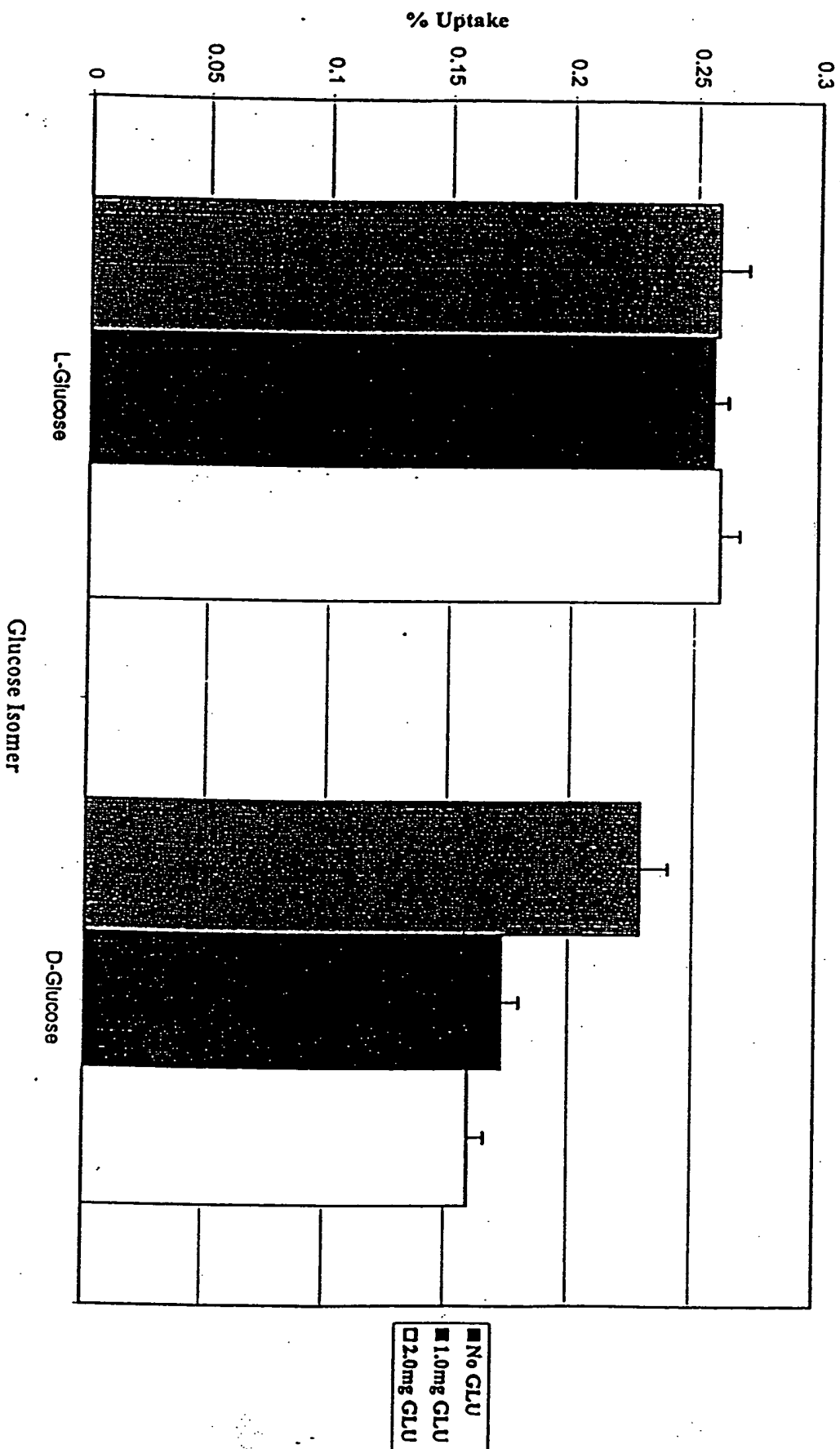


*In Vitro* Cellular Uptake of  $^{99m}\text{Tc}$ -EC-DG in Breast Cancer Cells after Glucose Loading (2 hours  
Incubation; 2uCi/well; 50,000 cells/well; 0.5mL/well)



**FIG. 70**  
Effect of d- and l-glucose on breast cellular (13762 cell line) uptake  
of  $^{99m}\text{Tc}$ -EC-DG.

*In Vitro* Cellular Uptake of  $^{18}\text{F}$ FDG in Breast Cancer Cells after Glucose Loading (2 hours  
incubation; 2uCi/well; 50,000 cells/well; 5mL/well)



**FIG. 71** Effect of d- and l-glucose on breast cellular (13762 cell line) uptake of  $^{18}\text{F}$ -FDG.

*In Vitro* Cellular Uptake of  $^{18}\text{F}$ FDG in Lung Cancer Cells after Glucose Loading (2 hours incubation;  
2uCi/well; 50,000 cells/well; 5mL/well)

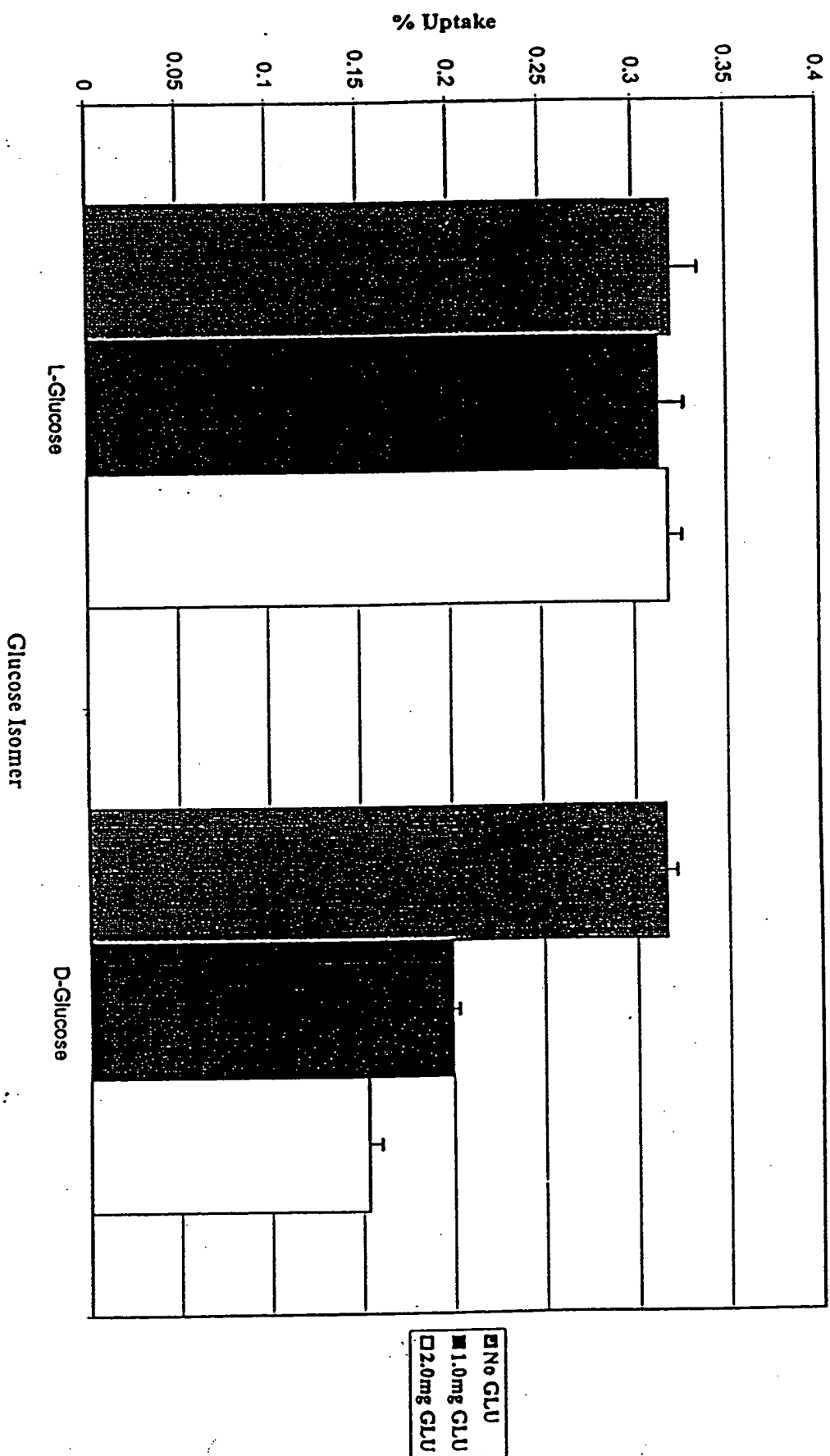
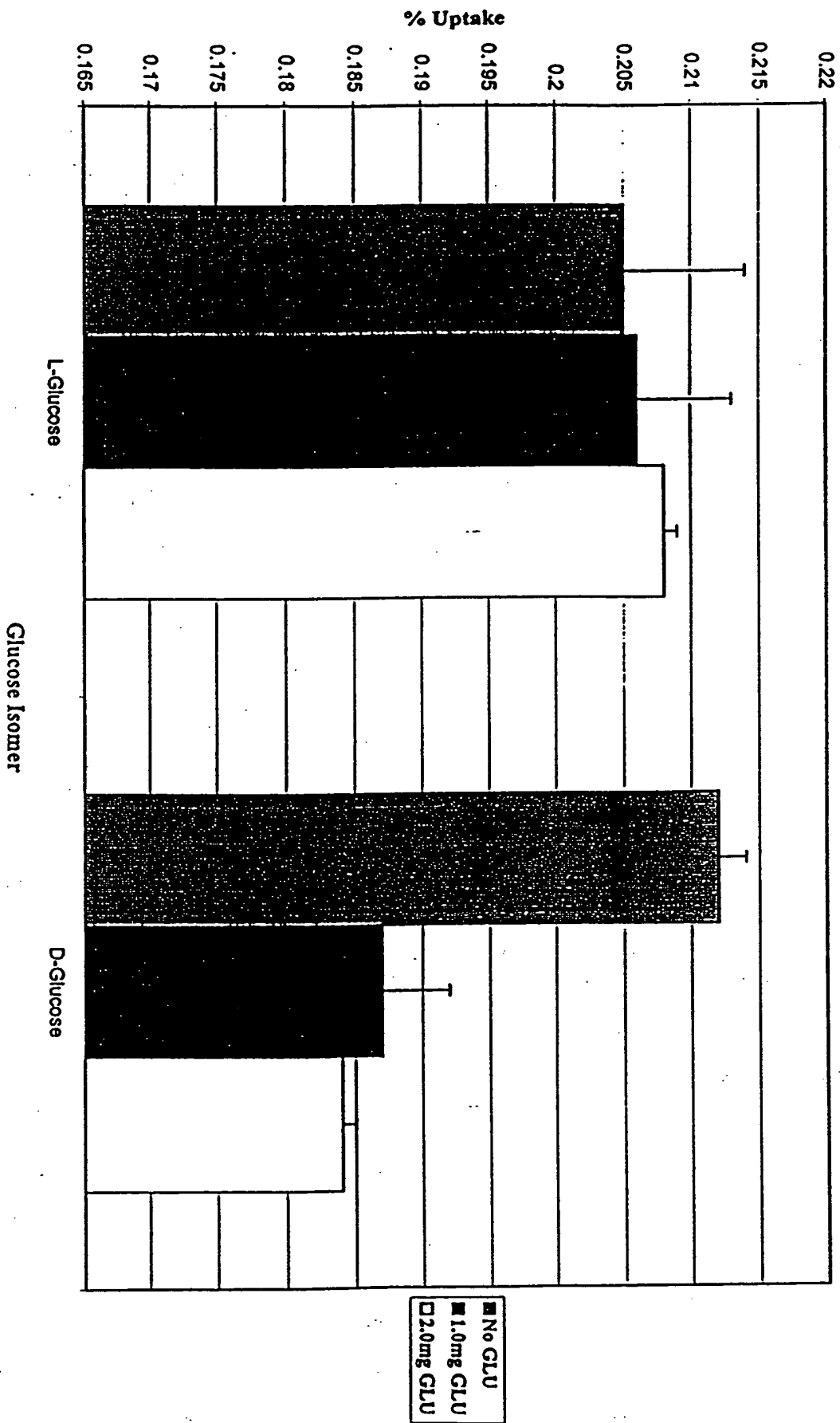


FIG. 72

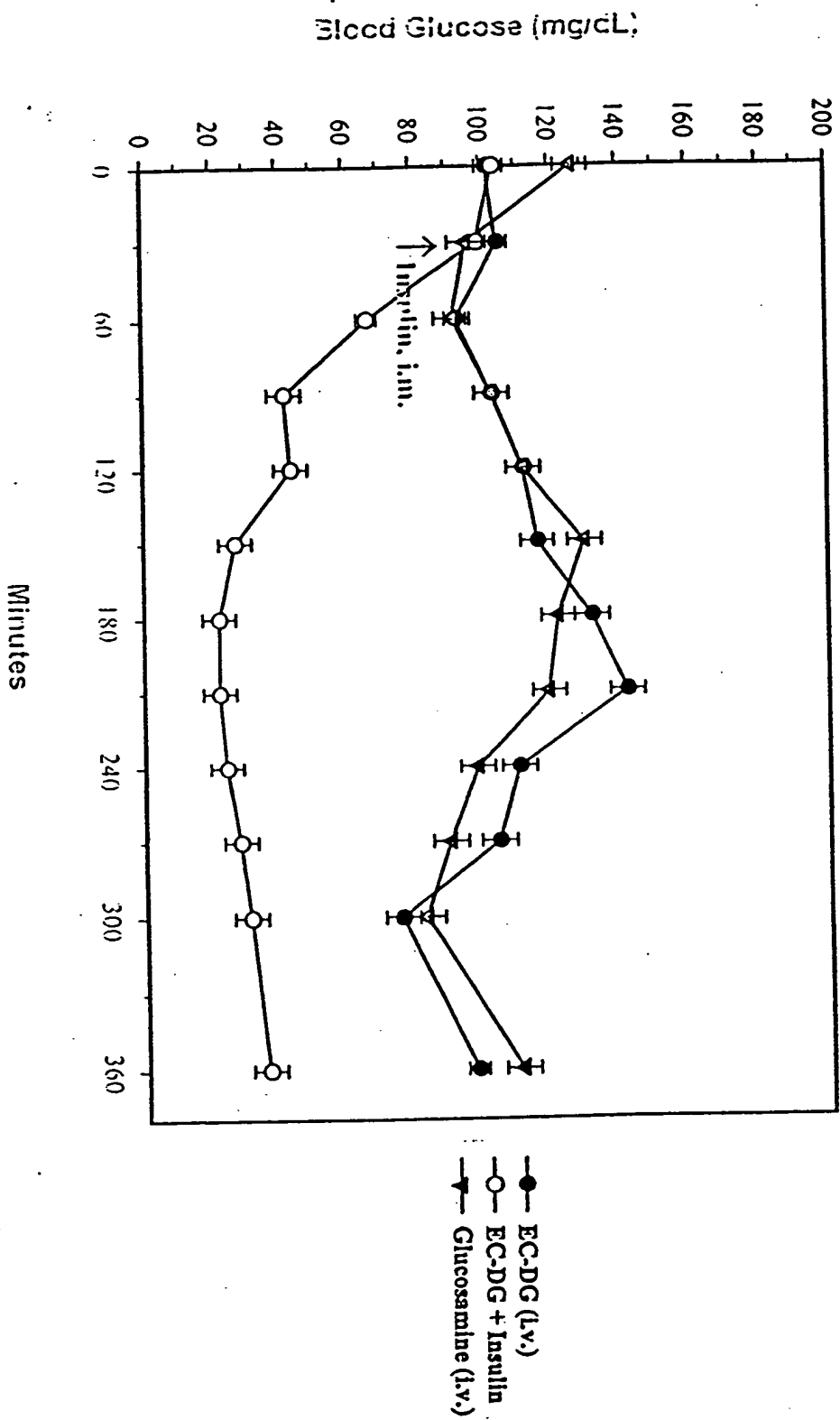
Effect of d- and l-glucose on lungcellular (A549 cell line) uptake of  $^{18}\text{F}$ -FDG.

*In Vitro* Cellular Uptake of  $^{99m}\text{Tc}$ -EC-DG in Lung Cancer Cells after Glucose Loading (2 hours incubation;  $2\mu\text{Ci}/\text{well}$ ; 50,000 cells/well; 0.5mL/well)



**FIG. 73**  
Effect of d- and l-glucose on breast cellular (A549 cell line) uptake of  $^{99m}\text{Tc}$ -EC-DG.

## Effect of Intravenous Injection of Glucosamine and EC-DG on Blood Glucose Level in Rats



**FIG. 74**  
Effect of *in vivo* blood glucose level induced by glucosamine and EC-DG (1.2 mmol/kg, i.v.).

## Effect of Intravenous Injection of FDG and FDG+Insulin on Blood Glucose Level in Rats

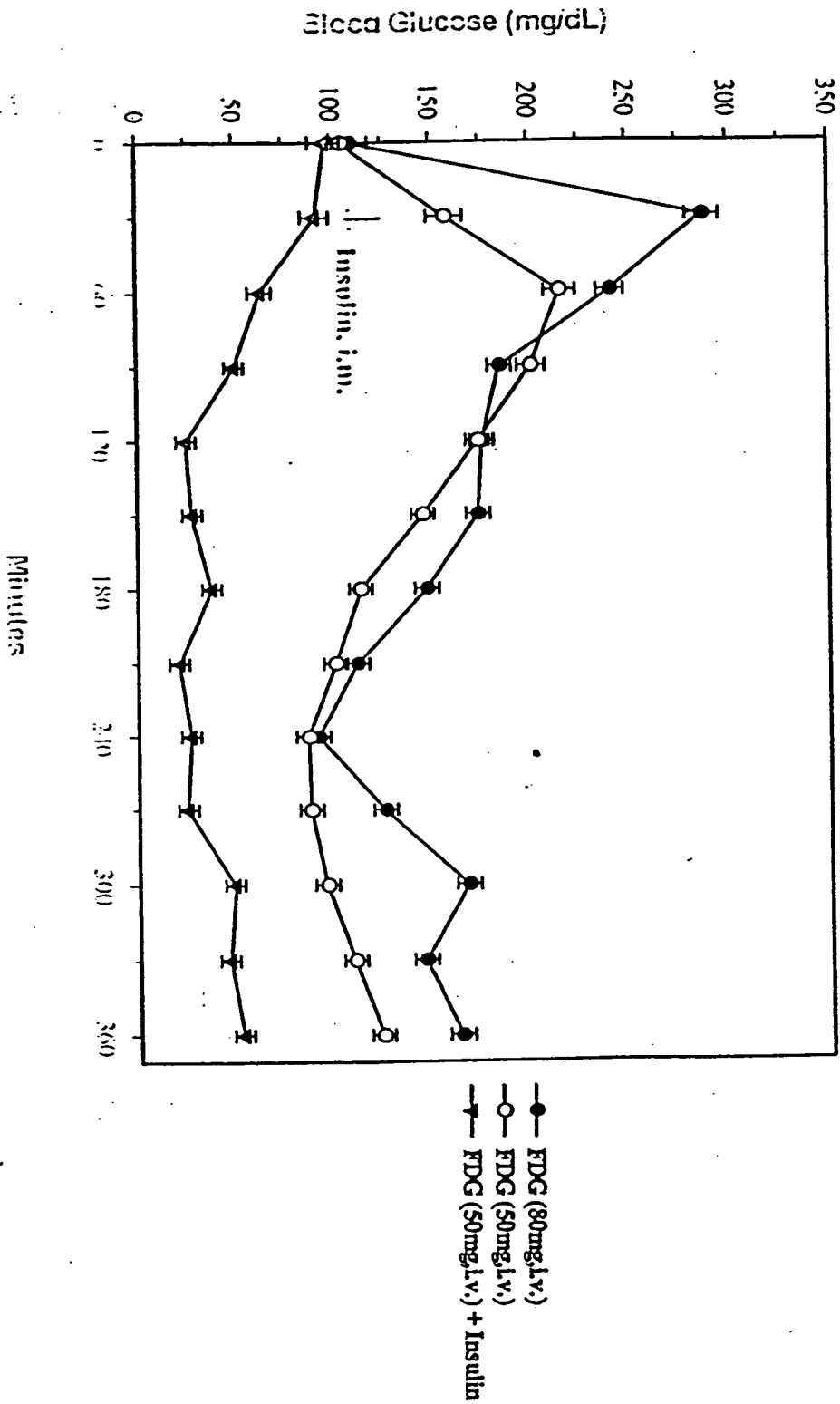


FIG. 75 Effect of *in vivo* blood glucose level induced by FDG (1.2 and 1.9 mmol/kg, i.v.) and insulin.

# Tumor-to-Tissue Count Density Ratios of $^{99m}\text{Tc-EC-Deoxyglucose}$ in Breast Tumor-Bearing Rats

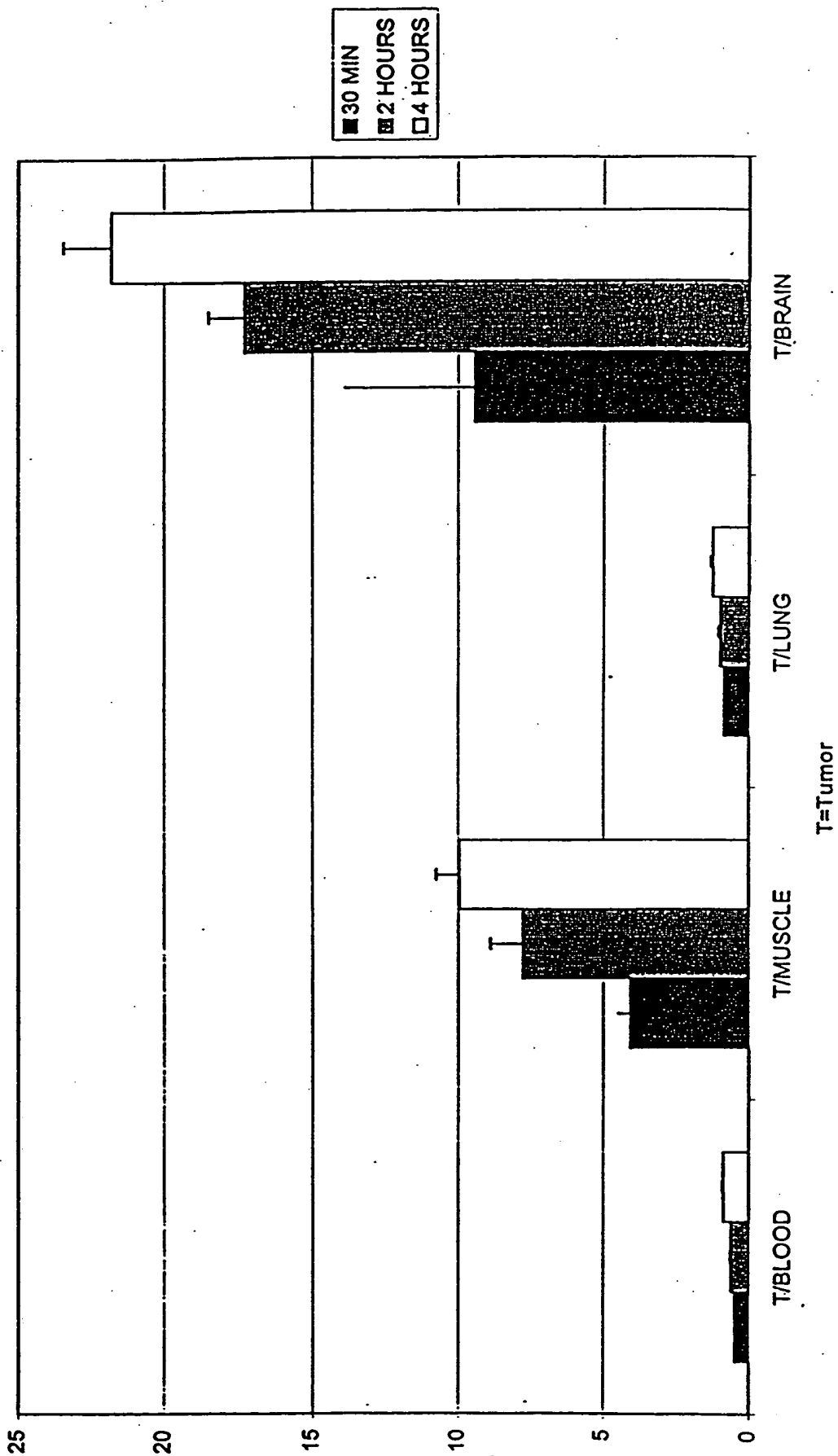
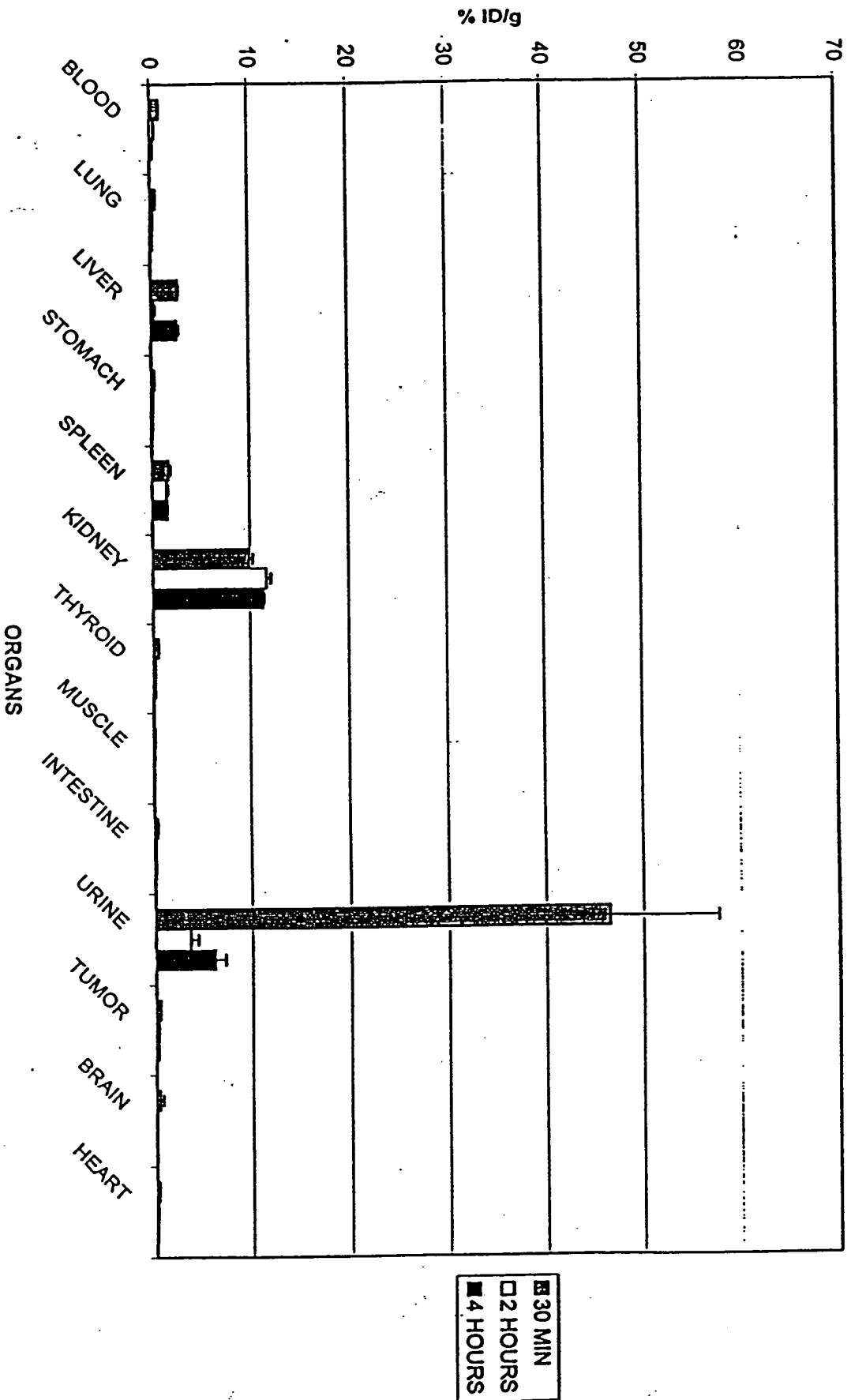


FIG. 76 Tumor-to-tissue count density ratios of  $^{99m}\text{Tc-EC-deoxyglucose}$  in breast tumor-bearing rats.

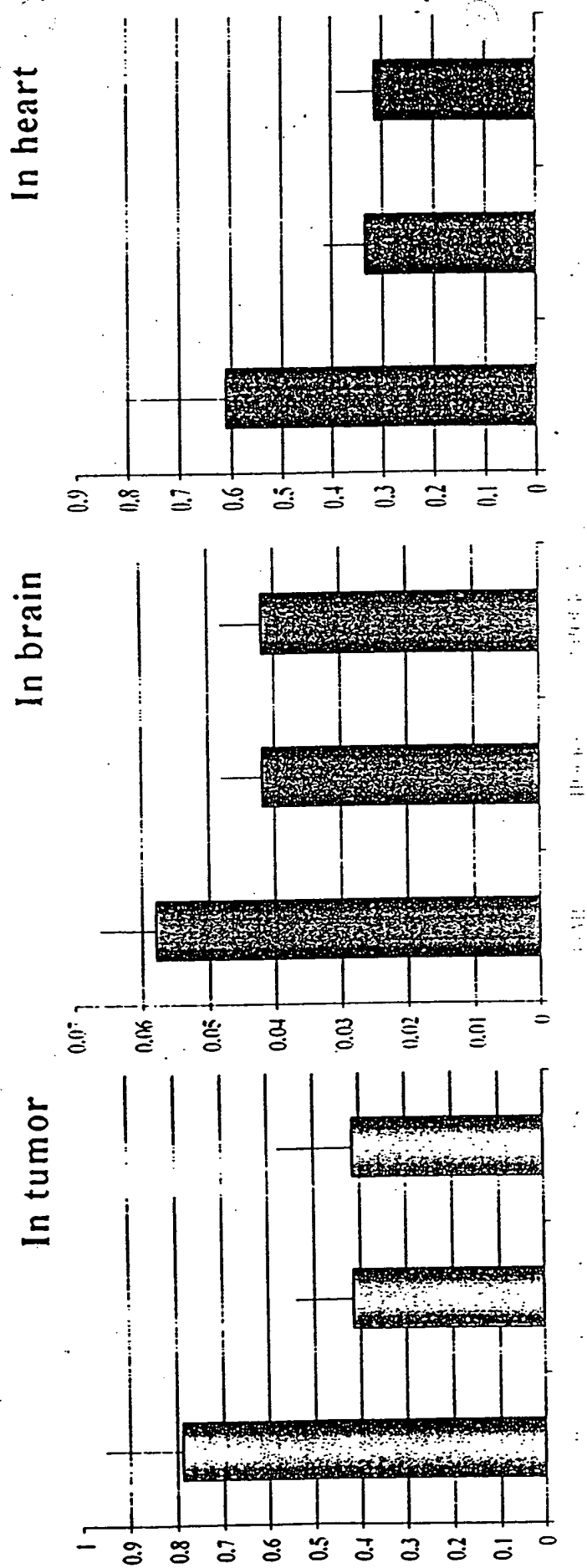
# *In Vivo Uptake of <sup>99m</sup>Tc-EC-Deoxyglucose in Breast Tumor-Bearing Rats*



**FIG. 77** In vivo biodistribution of <sup>99m</sup>Tc-EC-deoxyglucose in breast tumor-bearing rats.

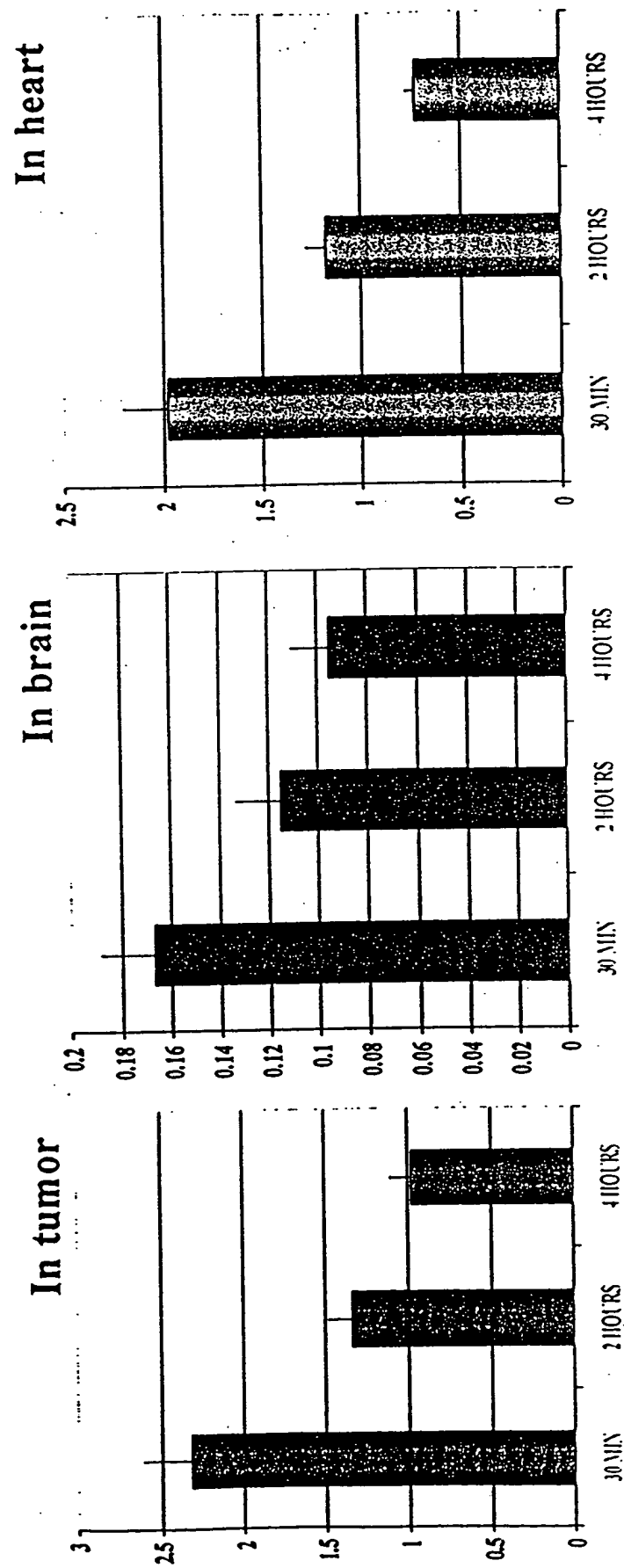


# *In Vivo* Uptake of $^{99m}\text{Tc}$ -EC-Deoxyglucose in Lung Tumor-Bearing Nude Mice



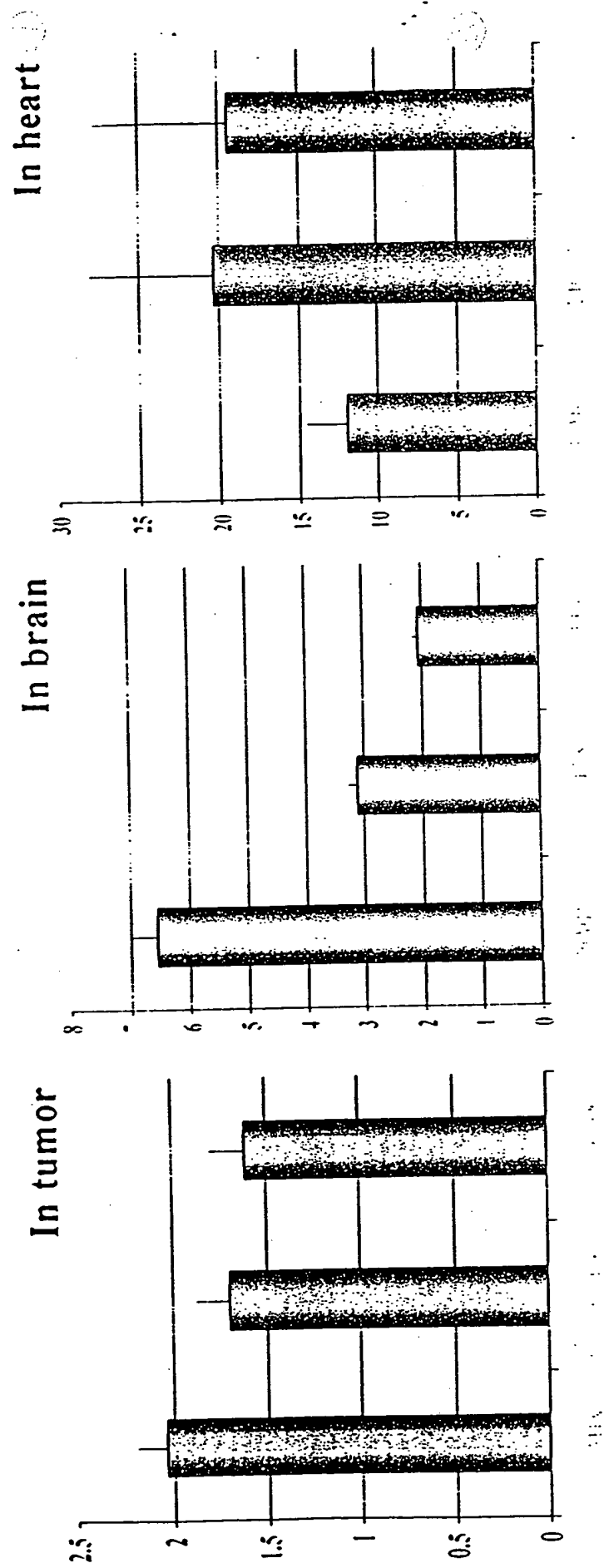
**FIG. 78** In vivo tissue uptake of  $^{99m}\text{Tc}$ -EC-deoxyglucose in lung tumor-bearing mice.

# *In Vivo* Uptake of $^{99m}\text{Tc}$ -EC-Neomycin in Lung Tumor-Bearing Nude Mice



**FIG. 79** In vivo tissue uptake of  $^{99m}\text{Tc}$ -EC-neomycin in lung tumor-bearing mice.

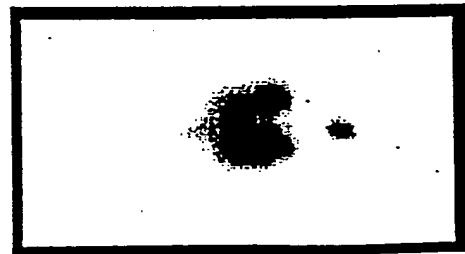
# *In Vivo Uptake of $^{18}\text{F}$ FDG in Lung Tumor-Bearing Nude Mice*



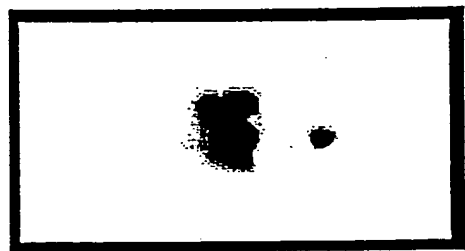
**FIG. 80** In vivo tissue uptake of  $^{18}\text{F}$ -FDG in lung tumor-bearing mice.

**$^{99m}\text{Tc-EC}$**

**$^{99m}\text{Tc-EC-Glucose(6)}$**



0.5



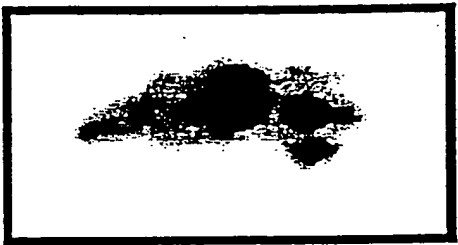
2



4hrs



0.5



2



4hrs

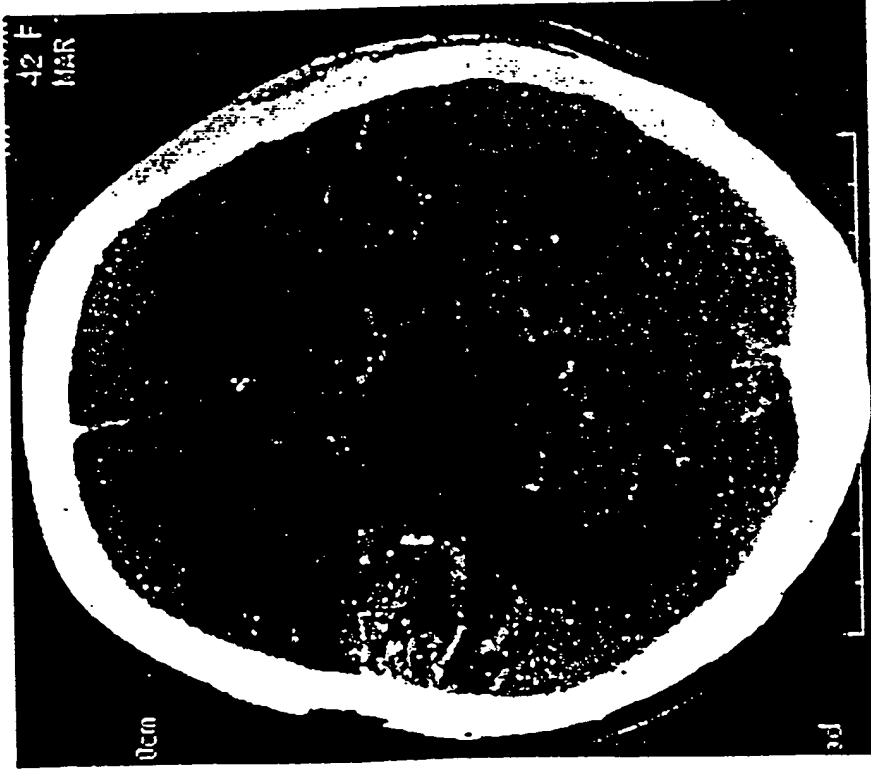
Planar image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-Glucose(6)}$  ( $100\mu\text{Ci/rat}$ , iv.) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

FIG. 81

Planar image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-deoxyglucose}$  ( $100\mu\text{Ci/rat}$ , iv.) showed that the tumor could be well visualized from 0.5-4 hours

Case 11/42

Dx : anaplastic astrocytoma



Pre OP



Post OP

NA YOUNG SOON 697800 F42 03A-0000 WONKWANG INTY HOSP

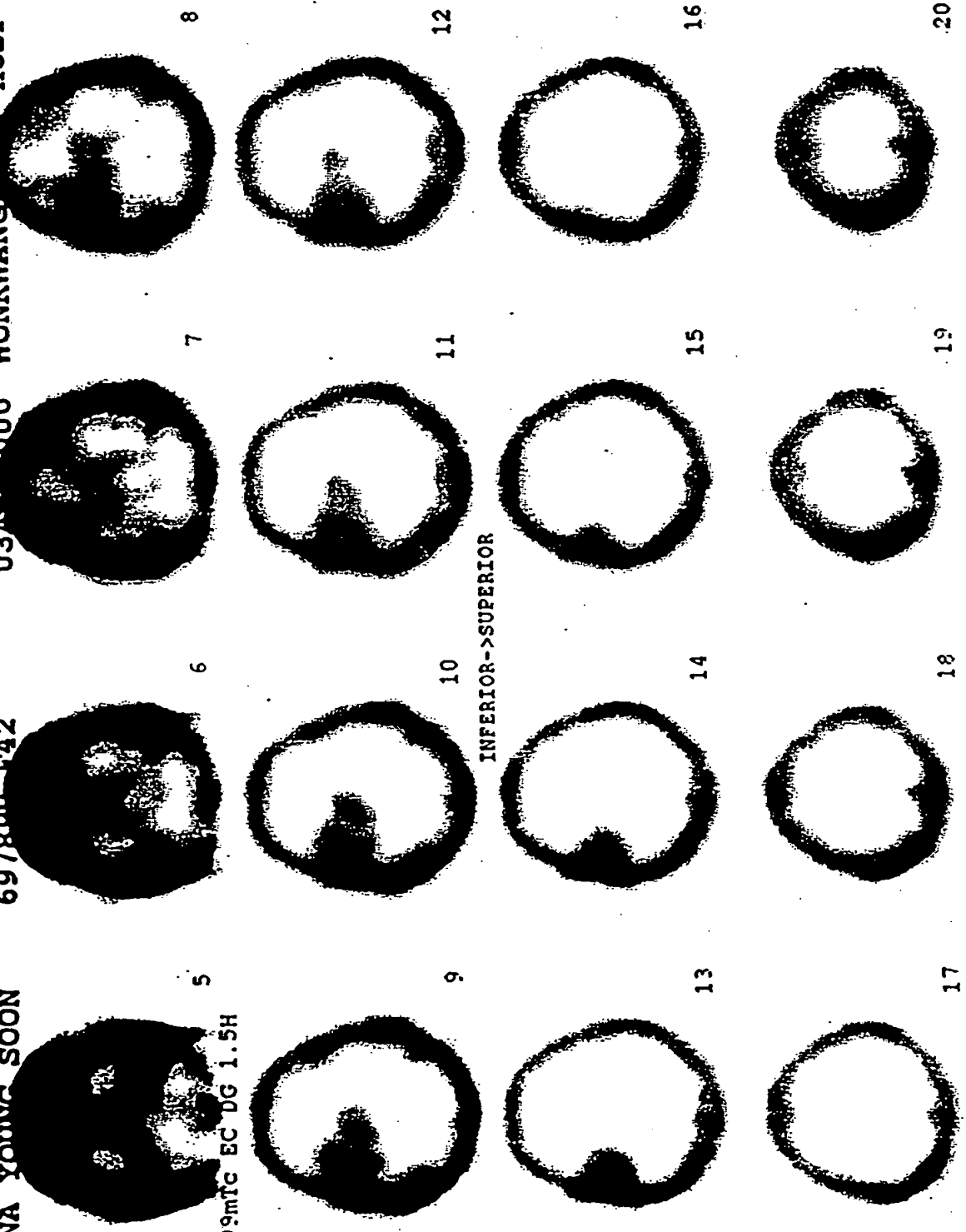
99mTc EC DG 1.5H

INFERIOR->SUPERIOR

EC--DG Scan

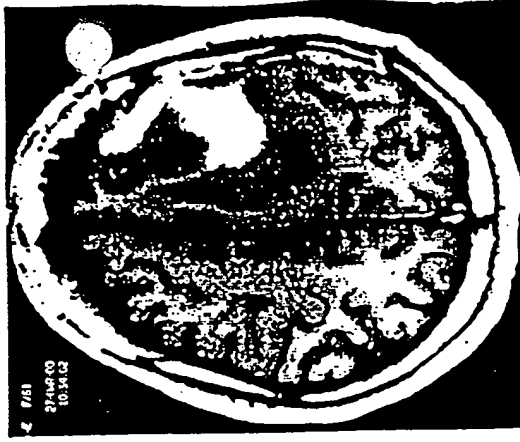
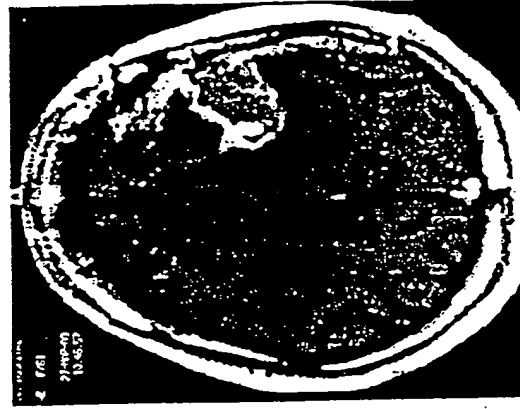
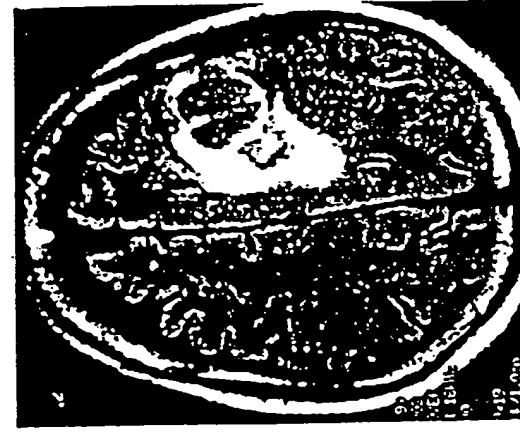
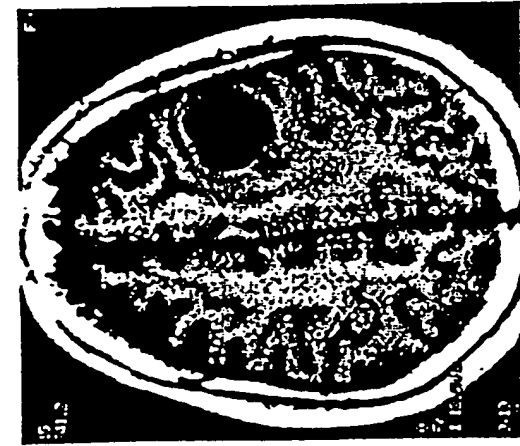
P0D-25D

99mTc EC DG scan of patient with gastroenteritis



Case 1761

Dx: anaplastic astrocytoma with hemorrhage

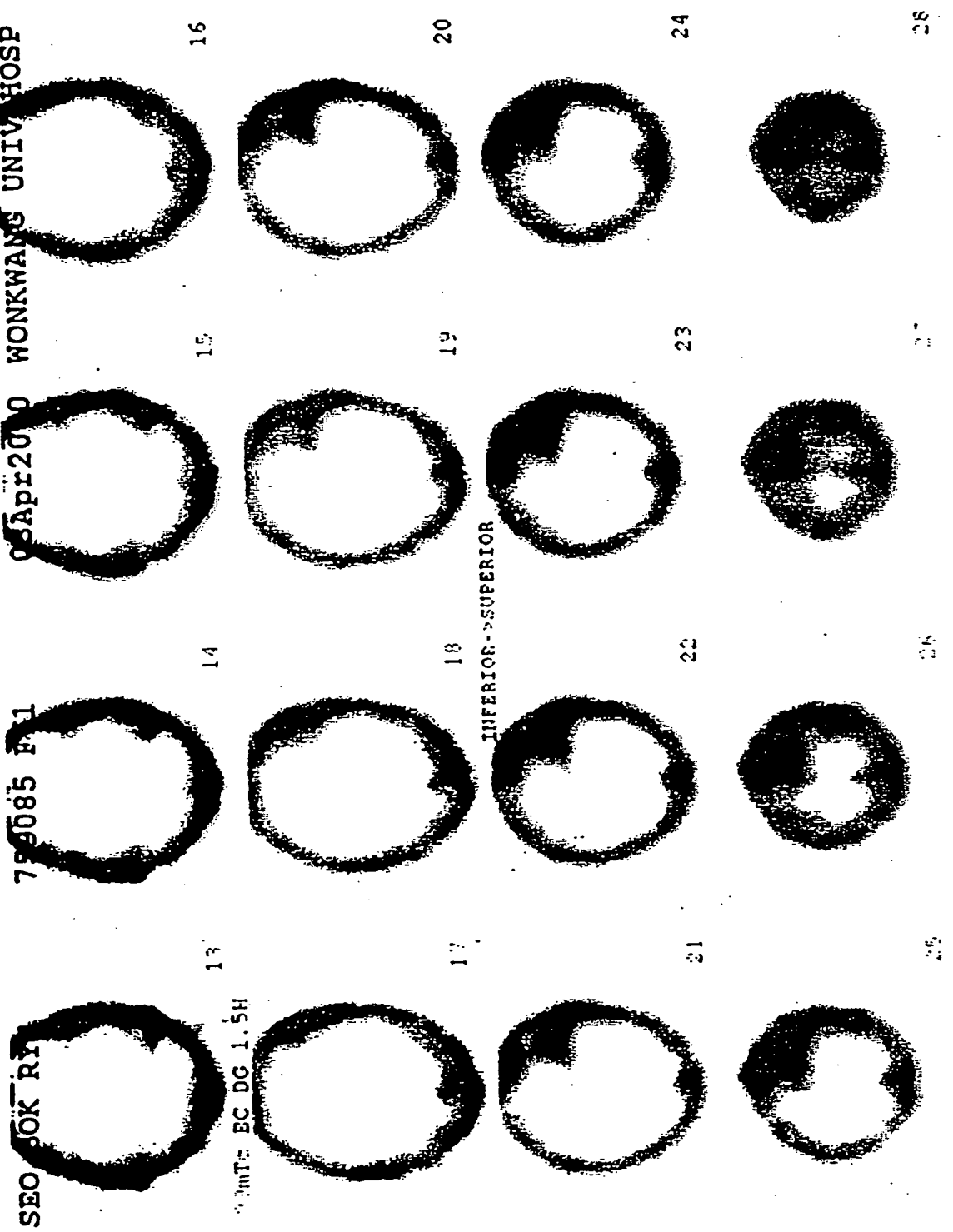


Pre -OP

Post-OP

FIG. 83A MRI of a patient with hemorrhagic astrocytoma.

SEO 50K RY 79085 F1 05Apr2000 WONKWANG UNIV HOSP



EC-DG Scan POD-26D

FIG. 83B SPECT with  $^{99m}\text{Tc}$ -EC-DG of a patient with astrocytoma.



Case 5 : M/62

Dx : Meningioma



FIG. 84A MRI of a patient with benign meningioma.

LIN 75 0316 062 04572000 WONKWAN UNIV HOSP

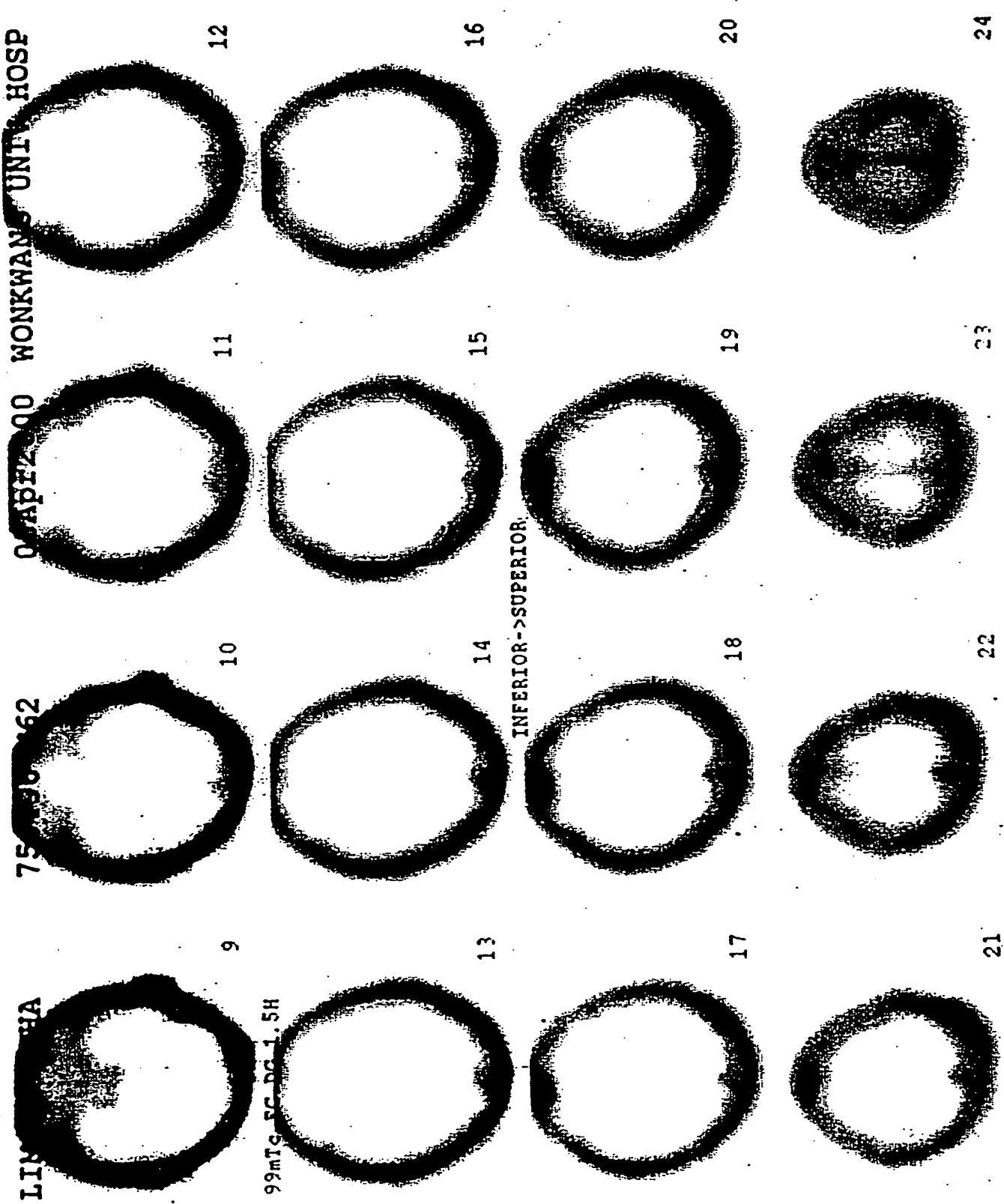


FIG. 84B SPECT with  $^{99m}\text{Tc-EC-DG}$  of a patient with benign meningioma

CASE 4. M/F

Dx: Pul. nodule (only necrotic material on biopsy)

TB pleurisy

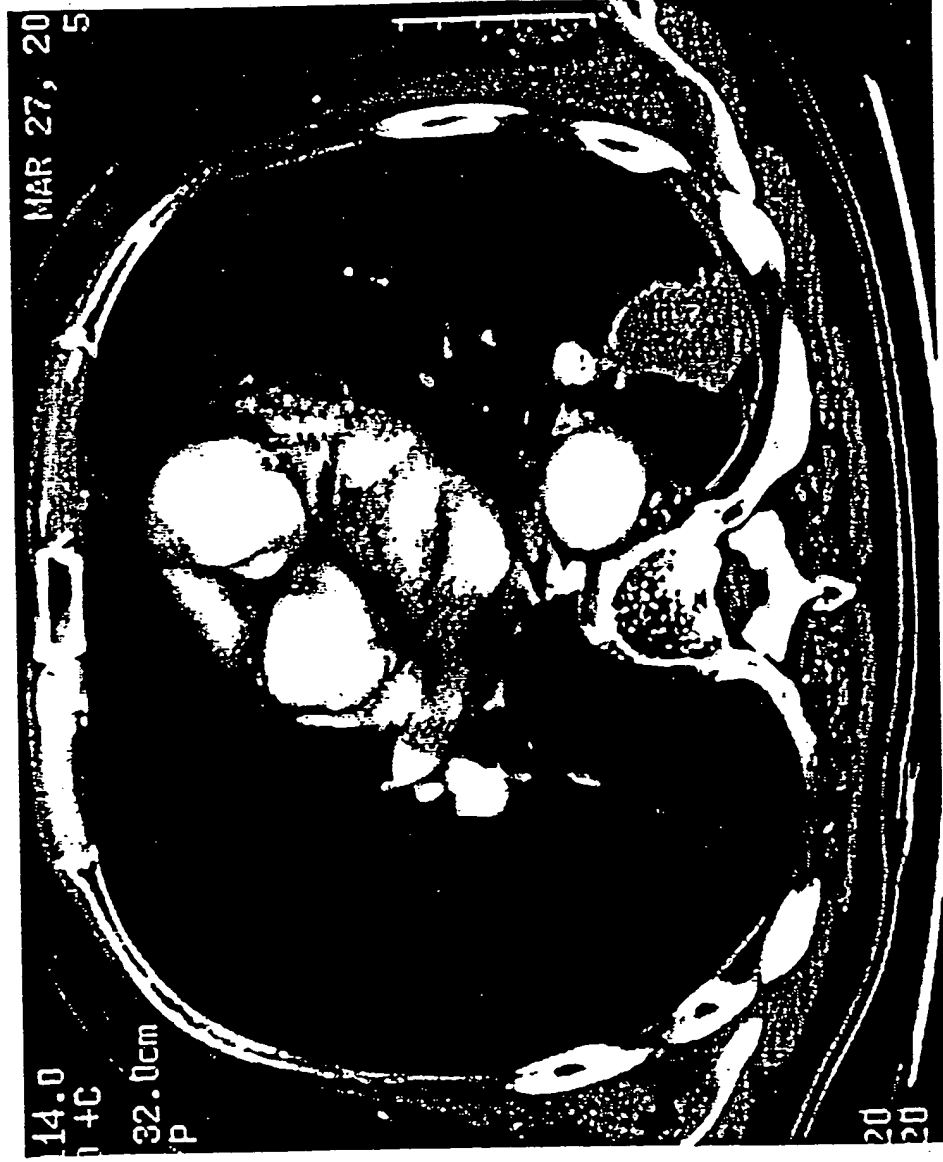
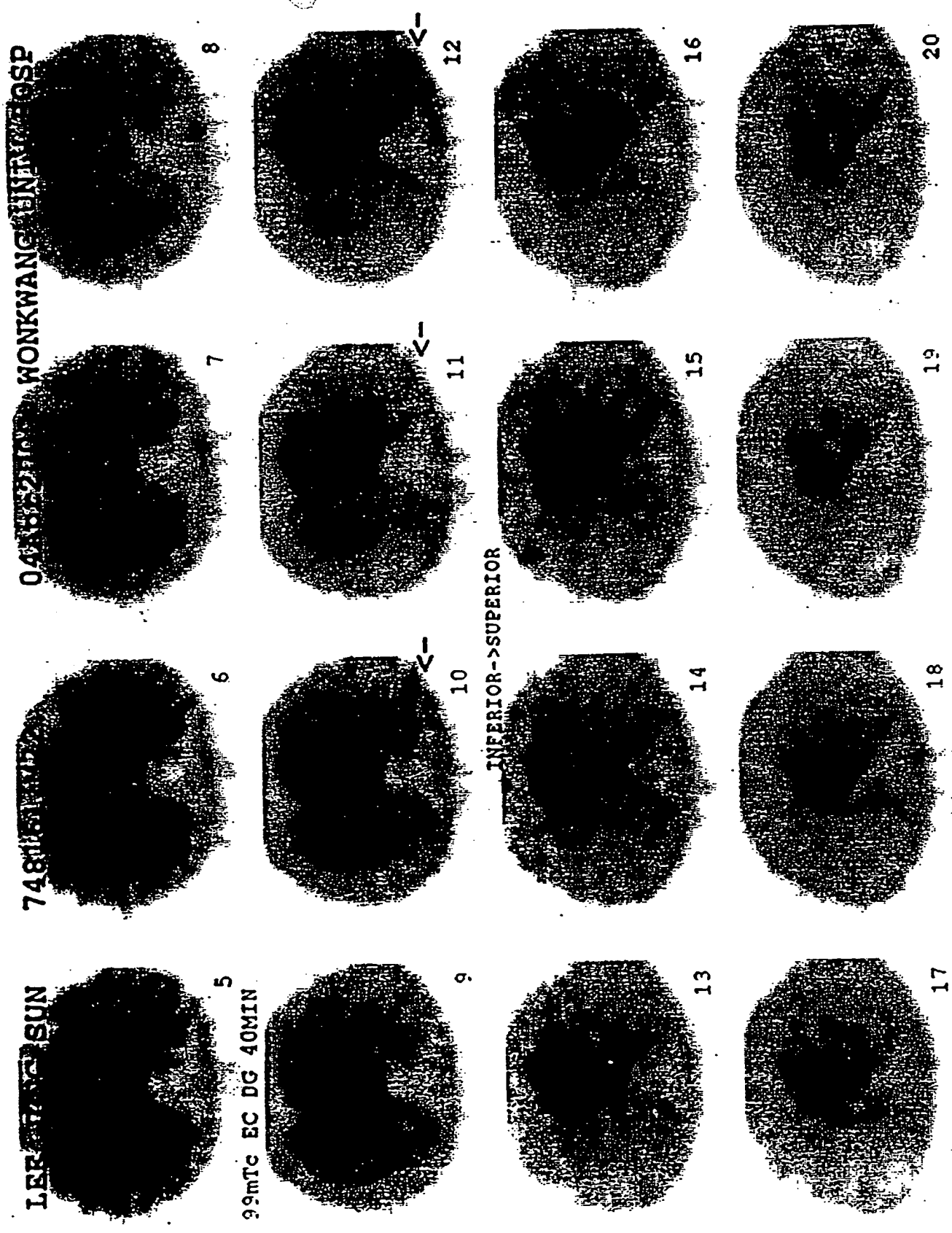


FIG. 85A CT of a patient with TB in lung.



SPECT with  $^{99m}\text{Tc}$ -EC-DG of a patient with TB showed no focal

FIG. 85B

Case 5 : 59/M

Dx: Squamous carcinoma



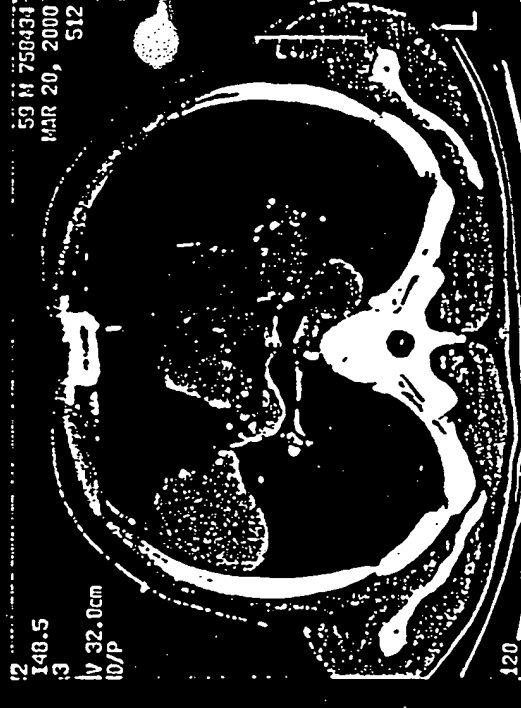
Pre RTX



Post RTX



Pre RTX



Post RTX

JUNG KI WOON  
EC DG 1H

758434 M59

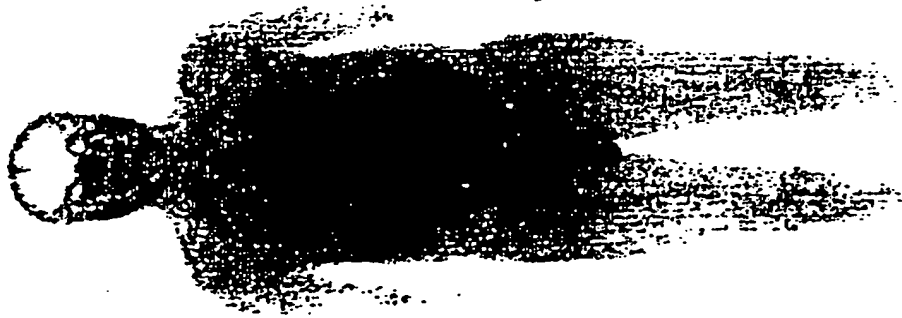
10Apr2000

WONKWANG UNIV HOSP



F

L



L



F



ANT

LUNG CANCER POST RTX 1WK

ANT

POST

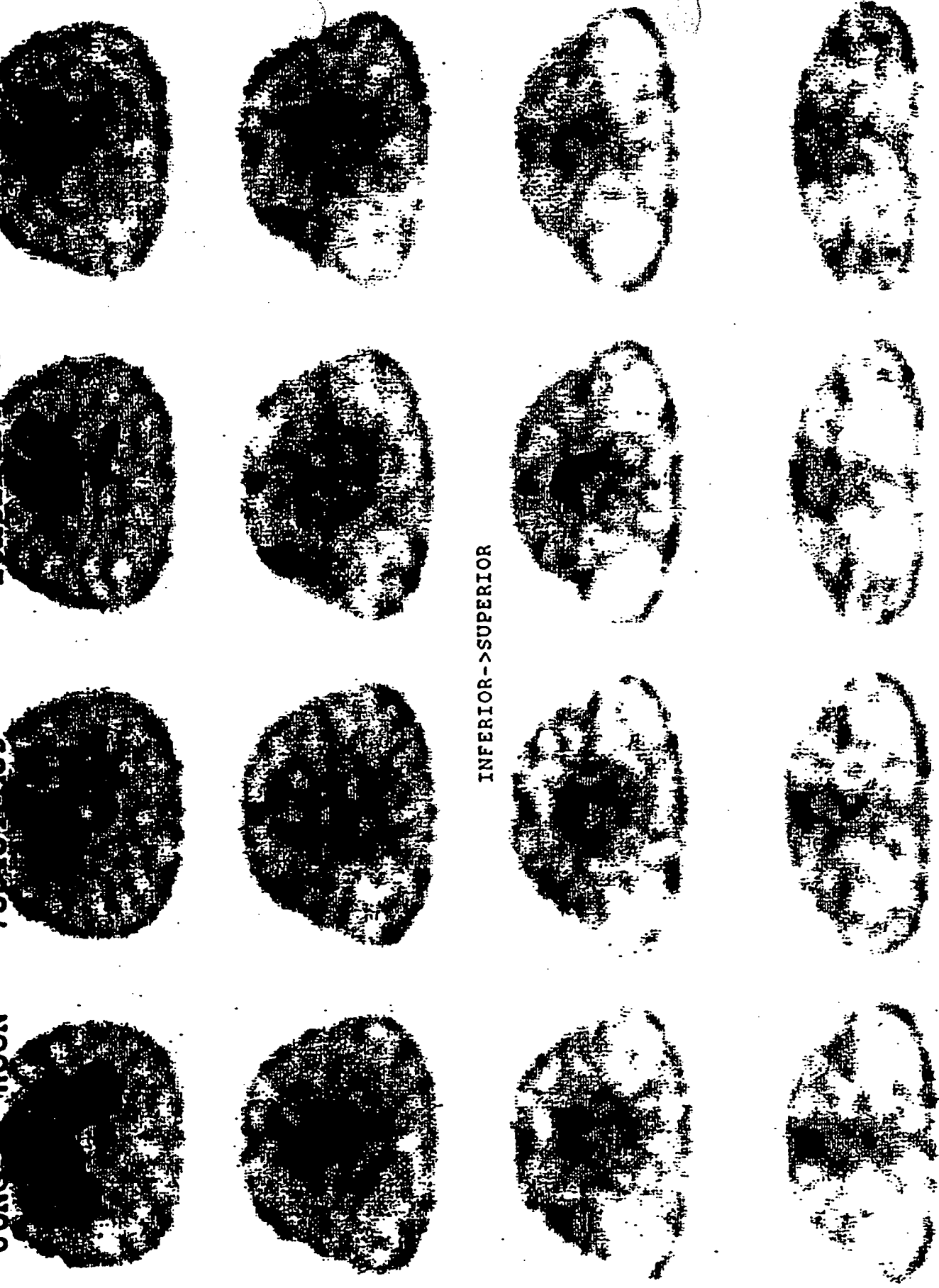
EC DG 1H

Whole body images of  $^{99m}\text{Tc}$ -EC-DG of a patient with lung

cancer

FIG. 86B

JUN 11 11:00 AM 7584321459 10 APR 2000 WONKWANG UNIVERSITY HOSP



INFERIOR -> SUPERIOR

EC DG 1H 30 MIN LUNG CANCER POST RTX 1WK

FIG. 86C SPECT with  $^{99m}\text{Tc}$ -EC-DG of a patient with lung cancer, the tumor showed focal intensified uptake.